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**ENERGY AND WATER DEVELOPMENT
APPROPRIATIONS FOR FISCAL YEAR 1983**

HEARINGS

BEFORE A

**SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE**

NINETY-SEVENTH CONGRESS

SECOND SESSION

Part 4 (Pages 2185-2717)

NONDEPARTMENTAL WITNESSES

Printed for the use of the Committee on Appropriations



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WASHINGTON : 1983

COMMITTEE ON APPROPRIATIONS

SUBCOMMITTEE ON ENERGY AND WATER DEVELOPMENT

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ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1983

WEDNESDAY, MARCH 31, 1982

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 2:20 p.m. in room 1318, Everett McKinley Dirksen Senate Office Building, Hon. Harrison (Jack) Schmitt presiding. Present. Senator Schmitt.

NONDEPARTMENTAL WITNESSES

HEARING PROCEDURE

Senator SCHMITT. The hearing will come to order.

In the absence of the chairman of the subcommittee, Senator Hatfield, I have been asked as a member of the subcommittee to preside over today's session. Senator Hatfield expresses his regret that he cannot be here this afternoon. I see we have another vote, which illustrates why he cannot be here this afternoon. He is managing a bill on the floor.

We have a large number of witnesses that wish to be heard. Therefore, in accordance with our notification to each of the witnesses, it will take some self-restraint on the part of everybody to hold their testimony to a minimum so that everybody wishing to testify will be heard. Obviously, your testimony will be included in our hearing record as submitted.

So, in keeping with the subcommittee's wishes, I ask that each of the detailed statements that each of you have worked out will be submitted for the record. That will be the record which will be studied in determining our judgment for the upcoming year. Also, in this case, we will have a carefully detailed record so that anyone who is not present will be able to arrive at an independent judgment. Then if each witness will summarize the high points of his or her testimony, it will be most helpful.

We will proceed to our first witness, and I am happy to welcome my neighbor and colleague from the great State of Texas—and I should say the water-poor State of Texas—Senator Tower.

TEXAS WATER RESOURCE PROJECTS

STATEMENT OF HON. JOHN TOWER, U.S. SENATOR FROM TEXAS

Senator TOWER. Thank you, Mr. Chairman. I appreciate my distinguished colleague, Congressman Brooks, who is senior to me in age and experience and almost every other way. [Laughter.]

Senator SCHMITT. Congressman Brooks, if you care to make a one-line response, you are certainly entitled to it.

Senator TOWER. I thought the better of that as soon as I said it. [Laughter.]

I would like to ask unanimous consent for my full statement to appear in the record and I will touch on the high points.

BRAZOS RIVER BASIN PROJECTS

First, the projects in the Brazos River basin which include \$550,000 for construction of the San Gabriel River project, \$217,000 for general investigation of the Brazos natural salt pollution control project, and \$600,000 for advance engineering design for Lake Millican.

I ask also, as called for, \$5.5 million for construction of Lake Aquilla and \$400,000 for the Brazos River and tributaries study.

For the Corpus Christi ship channel, I ask your approval of the full \$6 million capability expressed by the Corps of Engineers for the inner harbor 45-foot project which has been in the planning stage for 11 years.

TRINITY RIVER BASIN PROJECTS

Next, I must mention the Trinity River projects. These projects include \$308,000 for advance engineering and design of the Trinity River and its tributaries, \$27.8 million for construction on Lakeview Lake, and \$37 million for construction of Ray Roberts Lake.

There are, additionally, several projects in the Houston-Galveston area in need of funding. These include \$350,000 for the study of the San Jacinto River and its tributaries, and \$400,000 for the continued investigation of flood problems on the Buffalo Bayou and its tributaries.

I support the \$12,060,000 for the operation and maintenance of the Gulf Intracoastal Waterway, \$260,000 for advance engineering and design for Clear Creek, \$500,000 for the Galveston Bay navigation study, \$2 million for construction of Vince and Little Vince Bayous, and \$300,000 for Highland Bayou construction.

I ask also for \$11,710,000 for the operation and maintenance of the Houston ship channel which serves the largest U.S. port in foreign tonnage and is the third largest in total tonnage.

RED RIVER BASIN PROJECTS

Several Red River basin projects, including \$5.1 million for construction of the Arkansas-Red River chloride control project, \$190,000 for survey and investigation of Holiday Creek, which runs almost through my front yard and floods periodically, and \$1.5 million for construction at Cooper Lake which should be given funding consideration.

Finally, while there are no funds mentioned in the budget for the Neches River salt water barrier, I would like to reiterate my continuing support for this much-needed project. This area is responsible for 11 percent of the total U.S. petrochemical production which requires a tremendous volume of fresh water to maintain its present level of production. Further, I would like to ask for your attention to the testimony presented by the representatives of the Port of Freeport.

I would ask also for \$200,000 to be included for the investigation of the Pine Island watershed. I further request that this committee give due consideration to the testimony of those representing the Port of Freeport.

PREPARED STATEMENT

Thank you very much, Mr. Chairman. Again, if my statement could be printed in full in the record, I would be grateful.

[The statement follows:]

STATEMENT OF SENATOR TOWER

Mr. Chairman and members of the subcommittee, I appreciate this opportunity to appear before the Energy and Water Development Subcommittee of the Senate Committee on Appropriations to speak in regard to various public works projects which are located in the State of Texas.

Texas is undergoing an explosion in population, industrial, and agricultural growth. Natural water supplies cannot keep pace with this tremendous expansion. If we are to continue our high levels of productivity, we must be sure of reliable and adequate water supplies. The successful completion of these Texas projects proposed for funding before your subcommittee is essential to sustain this growth.

I feel compelled to point out that, in these times of national budgetary concern, each of these projects has been proven to be cost effective. The tangible benefits gained by our State and our Nation will outweigh the costs invested in each project during its lifetime. This is a point worth emphasizing—funding a water resource project is an investment in the future of our country that will repay itself many times over.

Finally, the environmental impact of each of the Texas projects has been carefully studied and the implementation of these necessary water development projects is being accomplished with appropriate environmental safeguards. Each is in compliance with the appropriate provisions of the various statutes designed to protect and preserve our environment. I believe the combination of environmental and economic factors in each project has been well balanced.

Mr. Chairman, I have been before this committee many times in behalf of flood control and water resource projects which have been proposed and built in the State of Texas. All Texans appreciate the members' understanding of the needs of our State. In their behalf, I want to express my personal gratitude for your work here.

At this time, I would like to make reference to some of the projects which I believe are vital to the welfare and economy of Texas, as well as the Nation.

First, the projects in the Brazos River basin, which include \$550,000 for construction of the San Gabriel River project, \$217,000 for general investigation of the Brazos natural salt pollution control project, and \$600,000 for advance engineering and design for Lake Millican. I ask also for \$5.5 million for construction of Lake Aquilla and \$400,000 for the Brazos River and tributaries study.

For the Corpus Christi ship channel, I ask your approval of the full \$6 million capability expressed by the Corps of Engineers for the inner harbor 45-foot project which has been in the planning stage for 11 years.

Next, I must mention the Trinity River projects. These projects include \$308,000 for advance engineering and design of the Trinity River and its tributaries, \$27.8 million for construction on Lakeview Lake, and \$37 million for construction of Ray Roberts Lake.

There are, additionally, several projects in the Houston-Galveston area in need of funding. These include \$350,000 for the study of the San Jacinto River and its tributaries, and \$400,000 for the continued investigation of flood problems on Buffalo Bayou and its tributaries.

I support \$12,060,000 for the operation and maintenance of the Gulf Intracoastal Waterway, \$260,000 for advance engineering and design for Clear Creek, \$500,000 for the Galveston Bay navigation study, \$2 million for construction of Vince and Little Vince Bayous, and \$300,000 for Highland Bayou construction.

I ask also for \$11,710,000 for the operation and maintenance of the Houston ship channel, which serves the largest U.S. port in foreign tonnage and is the third largest in total tonnage.

Several Red River basin projects, including \$5.1 million for construction of the Arkansas-Red River chloride control project, \$190,000 for survey and investigation of Holiday Creek, and \$1.5 million for construction at Cooper Lake should be given funding consideration.

Finally, while there are no funds mentioned in the budget for the Neches River salt water barrier, I would like to reiterate my continuing support for this much-needed project. This area is responsible for 11 percent of the total U.S. petrochemical production, which requires a tremendous volume of fresh water to maintain its present level of production. I would also ask that \$200,000 be included for the investigation of the Pine Island Bayou watershed. I further request that the committee give consideration to the testimony presented by the representatives of the Port of Freeport.

Mr. Chairman and members of the subcommittee, I thank you for the opportunity to express my views and I ask you to give each of the projects I have mentioned your careful consideration.

Thank you.

Senator SCHMITT. Thank you, Senator Tower. We will take a close look at your recommendations.

Senator TOWER. If you have any additional questions, I would be glad to work with the committee, Mr. Chairman.

Senator SCHMITT. The only question I might ask now is I presume there are other Texans living along the Holiday Creek; is that correct? [Laughter.]

Senator TOWER. Yes, yes, yes. It runs through Wichita Falls, Tex.

Senator SCHMITT. We did not want the record—

Senator TOWER. We do not get much rain, but when we do, it is a gully-washing stump. I have even caught carp in my front yard, which I did not eat; I gave them to my friends. [Laughter.]

Senator SCHMITT. Senator, we just wanted to be sure the record was clear that this was not a piece of legislation for you alone, but that you were part of a group of people.

Senator TOWER. No, not just for me.

Senator SCHMITT. Congressman Brooks?

STATEMENT OF HON. JACK BROOKS, U.S. REPRESENTATIVE FROM TEXAS

Mr. BROOKS. Thank you, Senator Schmitt. I won't take long. I ask unanimous consent that my prepared statement and attached letters of various political entities, which I have submitted, be made part of the record.

Senator SCHMITT. Without objection, your statement will be included in the record at the end of your oral remarks.

Mr. BROOKS. I want to say thank you for the opportunity to be here. I appreciate you personally taking time to come over and chair these hearings. Without you, it could not be done. We appreciate it on behalf

of all of the people here, Senator. I know you have a vote going, and it is tough to be gone for this time.

We support, and I support all of the items in the budget. I request they be funded at the full extent of the Corps of Engineers capability; namely, Dickinson Bayou flood control study of \$300,000, rather than \$100,000; the Taylors Bayou reconstruction project, \$12.7 million, up from \$1.7 million as budgeted. Both are essential and necessary.

I request three projects to be authorized that are not included in the budget, all being small ones: the Pleasure Island study at Port Arthur for \$300,000; the Neches River, which Senator Tower alluded to, for \$895,000; and the Galveston Harbor and Channel operations and maintenance of \$1.2 million. I also would support the channel to Liberty project which is not included in the fiscal year 1983 budget—that would take \$1,020,000 to maintain a 6-foot channel to Liberty.

INTRODUCTION OF SUPPORTING WITNESSES

I have with me Mayor Ron Crowder—if you would stand up—from the city of La Marque, Mayor Crowder; Mayor pro tem Jack Nash, who is right behind me; Councilman James E. Klyng; Councilman Jack Kivch; and City Manager Ivan Langford. From the city of Port Arthur we have Councilman Arthur Guidry, Arthur Grab, and Mrs. Shanklin.

From Galveston we have Commissioner Ben Blackledge, in the back with his wife, and Bob Taylor from Harris County.

We have Judge Richard LeBlanc from Jefferson County; Hubert Oxford from the Beaumont Navigation District; Jim Martin from the Port of Beaumont; El Bitreno, Joe Huff and Brenda Eastman from the Port of Galveston; Vice President Robert Horn; Pat Henderson, Joshua Allen, and Ronald Platt from District 6 in Jefferson County.

From District 7, Gene Rasheta, chairman; M. J. Adair, Robert Bodemuller, Julian Coghill, Joe Lyday, Leo Bryant, and Miss Joanie Bryant, his pretty daughter. From Jefferson County Flood Control Project Committee we have Chairman Danny Wheat and Mark Stiles.

Senator SCHMITT. It is a delight to hear all those familiar names, because as an astronaut and flying P-38's and helicopters around that country, I was using you all for landmarks. I appreciate it. [Laughter.]

Mr. BROOKS. They are all good ones, right?

Senator SCHMITT. They were excellent ones.

Mr. BROOKS. We appreciate your interest in them. If you have any questions, we will handle them. Otherwise, I will submit my statement.

PREPARED STATEMENTS

Senator SCHMITT. Your statement, together with other supporting statements, will be included in the record and I must run for about 10 minutes to go vote.

Congressman, we appreciate your interest and appearance here today.

Mr. BROOKS. Thank you.

[A brief recess was taken.]

[The statements follow:]

STATEMENT OF CONGRESSMAN JACK BROOKS OF TEXAS

MR. CHAIRMAN, THANK YOU FOR THIS OPPORTUNITY TO APPEAR TODAY TO URGE THE SUBCOMMITTEE'S FAVORABLE CONSIDERATION OF THE PUBLIC WORKS PROJECTS FOR THE NINTH CONGRESSIONAL DISTRICT OF TEXAS INCLUDED IN THE FISCAL YEAR 1983 BUDGET.

MR. CHAIRMAN, I SUPPORT FUNDING THOSE ITEMS INCLUDED IN THE BUDGET PROPOSAL AND IN THE INTEREST OF TIME WILL SUBMIT A LIST OF THEM WITH MY STATEMENT RATHER THAN DISCUSS EACH ONE INDIVIDUALLY.

IN ADDITION, I AM REQUESTING THAT TWO OF THESE BUDGETED PROJECTS BE FUNDED TO THE FULL EXTENT OF THE CORPS OF ENGINEERS' CAPABILITY. THESE ARE THE DICKINSON BAYOU FLOOD CONTROL STUDY - \$300,000 (\$100,000 IS BUDGETED), AND THE TAYLORS BAYOU CONSTRUCTION PROJECT - \$2,700,000 (\$1,700,000 IS BUDGETED). THE DICKINSON BAYOU STUDY WILL DETERMINE THE FEASIBILITY OF NONSTRUCTURAL AND STRUCTURAL MEASURES TO REDUCE FLOOD DAMAGES IN THE DICKINSON BAYOU WATERSHED, WHERE FLOODING HAS CAUSED EXTREME HARDSHIP TO ITS RESIDENTS. THE TAYLORS BAYOU DRAINAGE AND FLOOD CONTROL PROJECT WAS AUTHORIZED IN 1965 AND IS FINALLY READY FOR CONSTRUCTION TO BEGIN. PEOPLE IN JEFFERSON COUNTY HAVE ALREADY SUFFERED GREATLY FROM FLOODING IN THE AREA AND IT IS CERTAINLY TIME FOR WORK TO BEGIN TO HELP ALLEVIATE THIS SERIOUS PROBLEM. YOUR ASSISTANCE IN INCLUDING THE CORPS OF ENGINEERS' CAPABILITY FOR THIS PROJECT WILL BE DEEPLY APPRECIATED. I MIGHT ADD THAT THERE IS CURRENTLY A PROBLEM OVER SPOIL AREA IN THE ALREADY APPROVED PLAN; HOWEVER, ALL LOCAL SPONSORS, THE CORPS OF ENGINEERS, AND THE OWNER OF THE PROPERTY IN QUESTION ARE IN THE PROCESS OF WORKING ON A COMPROMISE TO RESOLVE THE SITUATION. I AM CONFIDENT THAT THE PROJECT WILL BE ABLE TO PROCEED WITHOUT DELAY.

ALSO, MR. CHAIRMAN, I AM REQUESTING THAT THREE PROJECTS WHICH ARE AUTHORIZED, BUT WHICH WERE NOT INCLUDED IN THE BUDGET FOR FISCAL YEAR 1983, BE FUNDED TO THE FULL EXTENT OF THE CORPS OF ENGINEERS' CAPABILITY. THESE ARE THE PLEASURE ISLAND STUDY AT PORT ARTHUR - \$300,000; THE NECHES RIVER AND TRIBUTARIES SALTWATER BARRIER FOR ADVANCE ENGINEERING AND DESIGN - \$95,000; AND THE GALVESTON HARBOR AND CHANNEL FOR OPERATION AND MAINTENANCE - \$1,200,000. THE PLEASURE ISLAND STUDY WILL DETERMINE THE CAUSE OF AND EVALUATE POSSIBLE SOLUTIONS TO THE SERIOUS EROSION PROBLEM OCCURRING ALONG THE NORTH AND WESTERLY SIDE OF THE 18-MILE LONG ISLAND. THE AMOUNT REQUESTED FOR THE NECHES RIVER AND TRIBUTARIES SALTWATER BARRIER WILL BE USED TO COMPLETE THE ADVANCE ENGINEERING AND DESIGN PHASE AND TO START CONSTRUCTION ON THE PROJECT. THE AMOUNT REQUESTED TO MAINTAIN THE GALVESTON HARBOR AND CHANNEL WILL BE USED TO

DREDGE THE CHANNEL INTO THE GULF BETWEEN THE JETTIES. THIS CHANNEL CARRIES ALL OF THE TRAFFIC FROM TEXAS CITY AND THE HOUSTON SHIP CHANNEL INTO THE GULF AND IS IN NEED OF DREDGING. I BELIEVE THAT ALL THREE OF THE ABOVE ARE WORTHY OF YOUR SUPPORT.

IT IS ALSO MY UNDERSTANDING THAT THE CHANNEL TO LIBERTY PROJECT IS NOT FUNDED FOR FY 1983. THE CORPS OF ENGINEERS HAS ADVISED ME THAT IN ORDER TO MAINTAIN THE EXISTING SIX-FOOT PROJECT, THEY NEED AN APPROPRIATION OF \$1,020,000. IT IS MY HOPE THAT THIS SUBCOMMITTEE WILL INCLUDE THAT AMOUNT IN ITS LEGISLATION.

MR. CHAIRMAN, AGAIN I APPRECIATE YOUR KIND CONSIDERATION. ALL OF THESE FEDERAL PUBLIC WORKS PROJECTS ARE CRITICAL TO THE ECONOMIC DEVELOPMENT OF MY DISTRICT WITH ITS MANY PETROCHEMICAL PLANTS AND HEAVY INDUSTRIAL OPERATIONS SO VITAL TO OUR ENTIRE COUNTRY. PORTS ALONG THE TEXAS GULF COAST ARE AN INTEGRAL PART OF THE ECONOMY OF THE NATION. THESE PROJECTS INSURE THE PRODUCTIVITY AND GROWTH OF THAT AREA AND HELP TO REMOVE THE EVER-PRESENT THREAT OF FLOODING AND ITS TRAGIC EFFECTS.

I HAVE WITH ME TODAY A NUMBER OF PERSONS VITALLY CONCERNED WITH THESE PROJECTS AND HERE TO SUPPORT THESE STATEMENTS AND TO ANSWER ANY QUESTIONS THE SUBCOMMITTEE MAY HAVE. I WOULD LIKE TO INTRODUCE THEM AT THIS TIME....

CITY OF BEAUMONT

COUNCILMAN CALVIN WILLIAMS

CITY OF GROVES

HAROLD LOCKE, DIRECTOR OF PUBLIC WORKS

CITY OF LA MARQUE

MAYOR RON CROWDER

MAYOR PRO-TEM JACK NASH

COUNCILMAN JAMES E. KLYNG

COUNCILMAN JACK KIVCH

CITY MANAGER IVAN LANGFORD

CITY OF PORT ARTHUR

COUNCILMAN ARTHUR GUIDRY

COUNTY OF GALVESTON

COMMISSIONER BEN BLACKLEDGE AND MRS. BLACKLEDGE

COMMISSIONER PAUL HOPKINS

COUNTY OF JEFFERSON

JUDGE RICHARD LEBLANC

BEAUMONT NAVIGATION DISTRICT

ATTORNEY HUBERT OXFORD, III

GALVESTON COUNTY DRAINAGE DISTRICT No. 2

CHAIRMAN MARCUS JUNEMAN

PORT OF BEAUMONT

PORT DIRECTOR JAMES MARTIN AND MRS. MARTIN

PORT OF GALVESTON

GENERAL MANAGER CHUCK DEVROY

JEFFERSON COUNTY DRAINAGE DISTRICT No. 6

PRESIDENT SAM O. SMITH

VICE PRESIDENT ROBERT HORN

COMMISSIONER PAT HENDERSON

COMMISSIONER JOSHUA ALLEN AND MRS. ALLEN

GENERAL MANAGER RONALD E. PLATT AND MRS. PLATT

JEFFERSON COUNTY DRAINAGE DISTRICT No. 7

CHAIRMAN EUGENE RASHETA

COMMISSIONER M. J. ADAIR

COMMISSIONER ROBERT BODEMULLER

COMMISSIONER JULIAN COGHILL

COMMISSIONER JOE LYDAY AND MRS. LYDAY

MANAGER LEO BRYANT AND MISS JOANIE BRYANT

JEFFERSON COUNTY FLOOD CONTROL PROJECT COMMITTEE

CHAIRMAN DANNY WHEAT

MARK STILES

I ALSO SUBMIT FOR THE CONSIDERATION OF THE SUBCOMMITTEE
STATEMENTS IN SUPPORT OF THESE PROJECTS FROM THE FOLLOWING:

CITIES OF:

BEAUMONT
FRIENDSWOOD
GROVES
HITCHCOCK
LA MARQUE
NEDERLAND
PORT ARTHUR
TEXAS CITY

BEAUMONT NAVIGATION DISTRICT
CLEAR CREEK DRAINAGE DISTRICT
GALVESTON COUNTY DRAINAGE DISTRICT No. 2
JEFFERSON COUNTY DRAINAGE DISTRICTS Nos. 3, 6 AND 7
JEFFERSON COUNTY FLOOD CONTROL PROJECT COMMITTEE
LOWER NECHES VALLEY AUTHORITY

COUNTIES OF:

GALVESTON
JEFFERSON

PORTS OF:

BEAUMONT
GALVESTON
PORT ARTHUR

CHAMBERS OF COMMERCE OF:

BEAUMONT
PORT ARTHUR

NINTH DISTRICT, TEXAS PROJECTS
FY 1983 FUNDING REQUESTS
(Amounts in \$ Thousands)

<u>Project or Study</u>	<u>President's FY 1983 Budget</u>	<u>FY 1983 Capability Amount</u>
<u>SURVEYS:</u>		
*Dickinson Bayou	\$ 100	\$ 300
Galveston Bay Area Navigation	500	500
**Pleasure Island at Port Arthur	0	300
<u>ADVANCE ENGINEERING AND DESIGN:</u>		
Clear Creek	260	282
**Neches River and Tributaries, Salt Water Barrier at Beaumont	0	895
<u>CONSTRUCTION:</u>		
Highland Bayou	300	300
*Taylors Bayou	1,700	2,700
Texas City and Vicinity, Hurricane-Flood	2,870	2,870
<u>OPERATION AND MAINTENANCE:</u>		
**Channel to Liberty	0	1,020
**Galveston Harbor and Channel	0	1,200
Gulf Intracoastal Waterway	12,060	17,820
Houston Ship Channel	11,710	11,710
Sabine-Neches Waterway	9,152	9,152
Wallisville Lake - Trinity River	65	65

*Project with higher Corps' capability for which the higher amount is requested.
 **Project not in budget for which the Corps' capabilities are requested.

STATEMENT OF BERNIS W. SADLER, MAYOR, PORT ARTHUR, TEX.

The City of Port Arthur must strongly oppose the proposed Taylor's Bayou Project including the pending request of Jefferson County Drainage District No. 6 for \$1,700,000 for Phase I of that project (1983 Budget), because certain features of the project would have severe negative impact on the land use and growth potential of certain property within and adjacent to the City of Port Arthur, Texas. Also, certain features of the project would seriously interfere with and substantially add to the costs of the City's sanitary landfill operation.

Although the City has previously supported the Taylor's Bayou Project, only very recently did the City learn of the specific location and intended use of a 906 acre tract, presently owned by Sabine Production Company, to be acquired by the Project sponsors as Disposal Areas 1 and 2 for perpetual spoiling of dredged materials and as a perpetual waterfowl habitat. This will have a very detrimental effect on the economy and the present and future tax base of the City of Port Arthur, in that this land, a portion of which is within the corporate limits of the City and the remainder of which is in process of being annexed, is extremely valuable for industrial development purposes. This particular area, near the City's main industrial and port areas, is one of the last few large areas on the ship channel also having highway frontage. The ship channel runs along one side of the property in virtually a straight line, thus it is unusually well suited for shipping purposes. A substantial number of jobs and tax revenues can be anticipated from industrial development of this property.

We must reiterate our objections to another feature of the Project, Disposal Site 6N, designated in Phase 2 of the Project for acquisition as a perpetual spoil disposal and waterfowl habitat site. The City has been negotiating with the landowners to acquire some 250 acres in this site for property needed to expand the City's landfill operation. The City has two to three years of usage remaining at the present site. The Project use of this adjacent land will force the City to look elsewhere and actually relocate our landfill operation. Any relocation of the landfill operation will require considerably more expense than use of the adjacent property.

It should be noted that at a meeting requested by the City on March 18, 1982, held at the Port Arthur City Hall, the sponsors of this Project, the Corps, some of the other governmental agencies involved, Sabine Production Company, and the City of Port Arthur all agreed to attempt to work out a compromise plan whereby spoiling on the 906 acre Sabine Production Company tract would be limited to the initial construction period of three years and the perpetual spoilage and waterfowl habitat would be relocated elsewhere, and whereby the spoil disposal and waterfowl habitat site 6N adjacent to the City landfill operation would be relocated elsewhere. If the settlement is accomplished, I will so advise this Committee. However, until and unless these matters are settled, the City must oppose the Project.

It is unfortunate that the Corps and Project sponsors did not see fit to inform and consult with the City of Port Arthur about these features of the Project with obvious potential import to the City. In all probability, the City's objections could have been worked out in the Project plans long ago. The City of Port Arthur regrets the necessity of objecting at this time to the Project.

GULF INTRACOASTAL WATERWAY (OPERATION AND MAINTENANCE)

The City of Port Arthur fully supports the request for \$12,060,000 for operation and maintenance of the Intracoastal Waterway System.

Approximately 12 miles of the busiest part of this waterway is within the City limits of Port Arthur, and it plays a vital role in serving the major industry of this area.

The City of Port Arthur would like to go on record in support of this important waterway system and encourages you to approve funds for continued operation and maintenance.

SABINE-NECHES WATERWAY (OPERATION AND MAINTENANCE)

The City of Port Arthur would like to go on record for approval of the Fiscal Year 1982 funds, \$9,152,000, as requested by our Honorable Congressman Jack Brooks.

The economic wellbeing of all citizens in Southeast Texas and this Nation is dependent upon adequate deep water for the transportation of goods produced to serve the Nation. Approximately 11% of the Nation's oil supply is handled in this area.

Your favorable action would be appreciated.

PLEASURE ISLAND AT PORT ARTHUR (SURVEY)

This letter is to urge the Energy and Water Development Subcommittee to include \$300,000 for a survey of Pleasure Island bank erosion. This is a valuable strip of land for recreational, commercial and industrial use, approximately 16 miles long, that is being rapidly eroded away by the wave action of ships and boats, which is destroying approximately 25 acres of land each year.

This soil is normally washed back into the ship channel and has to be removed, annually, causing expensive maintenance in the upkeep of this important waterway.

A major State highway is also being endangered by this erosion. The land area usefulness as a barrier against hurricane wave action is being destroyed.

Again, we urge that the Federal government make a thorough investigation into this severe problem that exists along the Sabine Neches waterway.

STATEMENT OF WARNER ROGERS, CHAIRMAN OF THE BOARD, BEAUMONT (TEX.)
CHAMBER OF COMMERCE

ON BEHALF OF THE BEAUMONT CHAMBER OF COMMERCE, AND THE GOLDEN TRIANGLE AREA BUSINESS COMMUNITY AND CITIZENRY, I STRONGLY URGE YOU TO APPROPRIATE FUNDS FOR THE ATTACHED LIST OF PUBLIC WORKS PROJECTS IN THE FY 1983 BUDGET.

BEAUMONT AND THE GOLDEN TRIANGLE ARE ECONOMICALLY DEPENDENT ON OUR AREA WATERWAYS, THEIR MAINTENANCE, AND THEIR FUTURE DEVELOPMENT. IN ADDITION, MANY OF THESE PROJECTS, SUCH AS TAYLORS BAYOU, ARE VITAL TO THE PROTECTION AND SAFETY OF EVERY INDIVIDUAL AND THEIR PROPERTY.

IF BEAUMONT AND THE GOLDEN TRIANGLE ARE TO MEET THE FUTURE NEEDS OF OUR CITIZENRY AND INDUSTRY, WE MUST CONTINUE OUR INVESTMENT IN THESE VITAL PROJECTS.

I URGE YOU TO TAKE IMMEDIATE ACTION TO APPROPRIATE FUNDS FOR THESE PROJECTS AND OFFER THE BEAUMONT CHAMBERS, AND MY PERSONAL, SUPPORT OF OUR CONGRESSMAN AND SENATORS IN OBTAINING THE FUNDS NECESSARY TO CONTINUE THESE PROJECTS.

PROJECTS FOR WHICH FUNDS WILL BE REQUESTED

Projects included in the FY 1983 Budget:

Clear Creek (Advance Engineering and Design)	\$ 260,000
Dickinson Bayou (Flood Control and Survey)	100,000
Galveston Bay Area (Navigation Survey)	500,000
Highland Bayou (Construction)	300,000
Sabine-Neches Waterway (Operation and Maintenance)	9,152,000
Taylor's Bayou (Construction)	1,700,000
Texas City & Vicinity (Hurricane Protection)	2,870,000
Wallisville (Operation and Maintenance)	65,000

Gulf Intracoastal Waterway (Operation and Maintenance)	12,060,000
Houston Ship Channel (Operation and Maintenance)	11,710,000

Projects not included in the FY 1983 Budget, but for which funding will be requested:

Pleasure Island (Survey)	\$ 300,000
Neches River Salt Water Barrier (Construction)	895,000
Galveston Harbor and Channel (Operation and Maintenance)	1,200,000

STATEMENT OF LEROY MCCALL, JR., CHAIRMAN, JEFFERSON COUNTY (TEX.) DRAINAGE DISTRICT NO. 3

The Commissioners of Jefferson County Drainage District No. 3 again wish to endorse the Taylor's Bayou Flood Control Project, and urge that the funds be included in this year's appropriation in order to allow the U. S. Army Corps of Engineers to proceed with construction.

This project has been going through planning and study stages for many years, and has been approved by the various environmental agencies, and we are now at the point where construction is finally ready to begin.

Jefferson County Drainage District No. 3, by nearly a 4 to 1 majority of the voters approved the issuance of Two Million (\$2,000,000.00) Dollars in bonds in order to finance our district's portion of the local participation. One Million (\$1,000,000.00) Dollars of these bonds have been sold and the funds from this sale are now available to pay our proportionate share of the local participation.

It is my understanding from the District Offices of the U. S. Army Corps of Engineers that they have the capacity to provide for the management of 2.7 million, or 1 million more than currently proposed.

Due to the fact that there is an urgent need for the project to be commenced in order to solve many of the flooding problems suffered by residents and property owners in all of Jefferson County, you are urged to approve the 2.7 million that the U. S. Army Corps of Engineers will need in order to begin initial construction in the coming fiscal year.

This project is of vital importance to all portions of Jefferson County, and while Jefferson County Drainage District No. 3 is located in the Western portion of the County, which is almost exclusively rice farming and residential homestead areas, it is vitally important to the rice producing area and to the improvements located in this area that the project be commenced.

It is our understanding from the Corps that bids will be let in late Spring or early Summer of this year, with actual construction to begin shortly thereafter.

We urgently request that this committee give consideration to including an appropriation of 2.7 million in the forthcoming appropriations to permit the Corps of Engineers to proceed with the project and will appreciate your cooperation in this respect.

STATEMENT OF WALTER J. CRAWFORD, CHAIRMAN, BEAUMONT NAVIGATION DISTRICT, TEXAS

SABINE-NECHES WATERWAY

The Beaumont Navigation District of Jefferson County, Texas is the local sponsor of the Sabine-Neches Waterway as authorized by Congress.

The Sabine-Neches Waterway is a federally maintained navigation project extending from the Gulf of Mexico, through a jettied entrance at the mouth of Sabine Pass, inland to the deepwater ports of Port Arthur, Beaumont, and Orange, Texas, a total distance of approximately 84 miles. The project includes deep draft channels of the following dimensions; 42 feet deep and 800 feet wide across the Sabine Bank in the Gulf of Mexico; 40 feet deep and a varying width of 800 feet to 500 feet through the jetty channel; a depth of 40 feet and a width of 500 feet from the jetty channel to the Turning Basins at Port Arthur; a 40 foot depth and a 400 foot width from Port Arthur via the Sabine-Neches Canal and the Neches River to the Port of Beaumont; a 30 foot depth and a 200 foot width from mouth of Neches River upstream thru the Sabine River to the Port of Orange.

In addition to the above dry cargo ports, Mobil Oil Corporation, Texaco, Incorporated, Gulf Oil Company - U. S., American Petrofina Company of Texas and Union Oil Company of California have located their major refineries along this ship channel. These five refineries have a total rated processing capacity of 1,339,000 barrels of crude oil per day. This is approximately 12% of the nation's refining capacity. A great majority of this crude oil is imported by tankers through this waterway. The ports and energy related industries along this channel have billions of dollars invested in wharves, docks and plant installations. A recent survey made by the Greater Port Arthur Chamber of Commerce reveals that an energy related industry expansion program of 680 million dollars is underway for 1982, and, additional expansion to cost 2 billion 113 million dollars over the next five years has been planned. The potential for additional industry expansion over the next ten years is estimated in excess of 4 billion 6 hundred million dollars.

Sunoco Terminals, Inc., a subsidiary of Sun Oil Company has had a tremendous construction and enlargement program during the past six years on the channel and additional expansion is contemplated.

In addition to providing crude oil to local refineries, Sunoco also furnishes the Texoma Pipe Line with considerable oil for their facility. This pipeline originates on the ship channel above Port Arthur, Texas and terminates at Cushing, Oklahoma, at which point crude oil is carried by connecting pipelines to the mid-west, the ultimate capacity of the Texoma line being 600,000 barrels per day. The Department of Energy has invested in excess of 35 million dollars in Sunoco's facilities not including the cost of a pipeline to the Hackberry Strategic Reserve Salt Dome oil storage terminal. The majority of this commodity is foreign imported crude oil and to handle this volume required many tankers in 1981.

All of this great development is largely due to the existence of the Sabine-Neches Waterway, the area's life line to the world for its exports and imports.

This extensive and expanding complex comprises a critical basic energy related industry that is absolutely vital to the nation's economic and energy needs. Their diminution for any reason would have a deleterious effect nationally as well as regionally.

The Corps of Engineers found that in 1979 there was in excess of 92,000,000 tons of dry and liquid cargo shipping on this waterway (the tonnage figures for 1980 and 1981 have not yet been released). Shipping of this magnitude necessarily involves the use of a great many vessels which, of course, creates congestion on the waterway. To compound the problems the present size of the grain ships, oil tankers and other cargo ships using this waterway are such that an even deeper and wider channel is badly needed.

Recent studies by the Corps of Engineers and complaints from the shipping industry reflect that there is serious siltation and shoaling in the Gulf entrance channel at Sabine, with extensive shoaling along several reaches of the inland channels. They find that these conditions will rapidly become worse and if not corrected, eventually the channel could be closed to deep sea navigation.

In correcting these conditions it will decrease chances of collisions and groundings of many hundreds of vessels carrying crude oil and refined products. Such occurrences, as stated by the Corps of Engineers in their environmental impact

report "would result in adverse environmental impact and public health hazards". Failure to maintain the channel would result in severe adverse economic effects on the project area, the state and the nation. Effects would include loss of billions of dollars worth of facilities adjacent to the channel, loss of employment for several thousand people and disruption of the manufacture and transportation of a significant portion of the nation's "fossil fuel supply".

The Corps of Engineers' break-down of the 9 million 1 hundred fifty-two thousand dollars included in the proposed budget for F. Y. 1983 is as follows: \$6,040,000 for hopper dredging in the Gulf and Sabine entrance of the ship channel; dredging in the inland channels, \$3,030,000; administration, engineering, surveys, etc., \$82,000.

As the sponsoring agency, Beaumont Navigation District stands ready to provide all needed disposal land areas, rights-of-way, relocations and confining structures for this project.

The District, representing the above mentioned many ports, refineries, grain elevators and other shippers using this Waterway, supported by our Congressman, the Honorable Jack Brooks, respectfully request your favorable consideration for the inclusion of 9 million 1 hundred fifty-two thousand dollars in the F. Y. 1983 budget, in order that this badly needed work may be accomplished.

TAYLORS BAYOU DRAINAGE AND FLOOD CONTROL PROJECT.

The Beaumont Navigation District, as one of the sponsors of the Taylors Bayou Drainage and Flood Control Project, re-affirms its support of this most worthy endeavor.

The Taylors Bayou watershed contains an area of approximately 464 square miles. Approximately 66% of Jefferson County is drained by Taylors Bayou and its tributaries. This includes drainage from 80% of the City of Beaumont and includes drainage from the cities of Port Arthur, Nederland and Port Neches, some of which is "pumped in" from the Hurricane-Flood Protection System which serves the latter three cities. Also included in the foregoing is considerable agricultural drainage.

Drainage in this watershed has been a problem of long standing. Considerable drainage work has been accomplished over the years by local interests but we have been unable to keep pace with the mounting problems brought on by land development and improvement, both domestic and industrial, and by the construction of highways and a wildlife refuge across the floodway. These drainage needs are now of such magnitude that federal aid is necessary to continue this work.

Funds to continue construction on Phase I of the Taylors Bayou Project are again urgently needed. The 1.7 million dollars presently proposed in the F. Y. 1983 budget is indeed greatly appreciated. However, in recent discussions with the U.S. Corps of Engineers, it was developed that the Corps has a capability to efficiently manage 2.7 million dollars for this project in F. Y. 1983.

The Beaumont Navigation District, representing the people and the industries affected by this project, with the support of our Congressman, the Honorable Jack Brooks, respectfully request your favorable consideration for the inclusion of 2.7 million dollars in the F. Y. 1983 Budget, in order that this drainage work may continue.

We greatly appreciate your efforts on behalf of the citizens of Jefferson County for supporting this and other worthy improvements in our community and wish you success in obtaining the funds to ensure the continuity of construction on this project.

As one of the sponsoring agencies, Beaumont Navigation District stands ready to meet our obligations in furnishing the items of local co-operation required in this project.

STATEMENT OF DAVID C. HOPSON, JEFFERSON COUNTY, TEXAS

My name is DAVID C. HOPSON. I work for Sabine Production Company. Sabine is the owner of a certain tract of land located in Jefferson County, Texas, comprising approximately 906 acres. A portion of the property is already located within the city limits of the City of Port Arthur, Texas, and the rest of the tract is presently being annexed by the City of Port Arthur. Sabine opposes further construction of the Taylors Bayou Project if this 906 acre tract must be taken from Sabine and either spoiled upon or used as a waterfowl habitat. Recently, however, the parties involved in this Project, including the Corps of Engineers, have been considering a settlement. If the settlement is finalized, Sabine would have no further opposition to the Project as such. If it is so settled, Sabine will notify the Committee in writing.

The Taylors Bayou Project has been the subject of controversy since its inception in the late 1940's. At least as early as 1975, the record now seems clear that the Corps was considering the use of the 906 acre Sabine tract for the purpose of depositing spoils upon such tract, which were recovered from dredging operations in connection with the Project itself. Further, in the year of 1979, it appears that the Corps and others decided that the 906 acre tract should also be permanently set aside for a waterfowl habitat. The Environmental Impact Statement and the final Design Memorandum promulgated in 1981 required that the local sponsors obtain the 906 acre tract for such spoiling and for the intermittent use as a waterfowl habitat for the life of the Project of 50 years. Notwithstanding this intended use of the 906 acre tract, Sabine was never notified by either the Corps or the local sponsors of such intended use. A condemnation suit has recently been filed against Sabine by two of the sponsoring districts. Sabine is resisting such condemnation efforts.

as previously designed
Sabine opposes the Project for various reasons. First, Sabine objects to the tactics used by the Corps and the District in connection with the Project. Under the guise of a request for permission to do archaeological work, the Corps subsequently trespassed upon Sabine's property and recovered valuable coring data. Notwithstanding the long period of time in which both the Districts and the Corps knew of the intended use of this property, neither the Corps nor the Districts sought to contact Sabine and confer with Sabine about such uses. Further, by resolution of the Project sponsor and by virtue of written undertaking with the United States Government by the same sponsor, in the year 1972, the sponsor agreed to be guided by the land acquisition policies in Sections 301 and 302 of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. The sponsor has not adhered to such law, and the Corps has not required the sponsor to adhere to the law.

With respect to the cost and benefits of the Project itself, Sabine would point out that the ratio of benefits to cost is only 1.18 to 1. Included as cost of money is a percentage figure of only 3-1/4 percent. The Corps contends that 3-1/4 percent interest is appropriate since one of the sponsoring districts agreed to the Project in 1969, even though the District was forced to pay 9-1/2 percent in order to issue bonds for the Project in 1981. Further, it should be pointed out that 73 percent of the benefits of the Project are attributable to rural areas outside of the City of Beaumont and have nothing to do with flood control whatsoever. The Project, based upon 1981 pricing, will cost \$100,000,000. The Corps of Engineers have admitted that, even with the expenditure of this sum of money, flooding in Beaumont will not be prevented. As a matter of fact, the City of Beaumont has employed the firm of Kohler & Kohler to make a study of flooding. The conclusion of this firm is that the single most important project to prevent flooding in Beaumont is to divert the flood waters directly into the Neches River.

The Project documents reveal that the taking of Sabine's tract and the use thereof for spoiling and for waterfowl habitat is a prerequisite of the Project itself. The 906 acre tract is located along the Sabine-Neches waterway. Ocean-going vessels regularly travel up and down this waterway. The tract is ideally suited for industrial development. Very few tracts of this large size remain undeveloped along the Texas Gulf Coast. Consequently, the tract, when fully developed, will serve to provide many jobs for citizens of Port Arthur and will provide a very large tax base for its citizens. Certainly, the Project can be redesigned so as to exclude from consideration any attempt to permit governmental entities to forceably take title to Sabine's tract and convert it into either a spoiling area or a waterfowl habitat.

STATEMENT OF JAMES W. MARTIN, PORT DIRECTOR, PORT OF BEAUMONT, TEX.

The Port of Beaumont Navigation District of Jefferson County, Texas, strongly supports that item in the fiscal year 1982 budget for public works which proposes \$9,152,000 for continued operation and maintenance of the Sabine Neches Waterway and respectfully urges favorable consideration and action by your committee.

In this connection the Port of Beaumont Navigation District of Jefferson County, Texas, fully supports the statement submitted by the Beaumont Navigation District of Jefferson County, Texas, the local sponsor of the waterway as authorized by Congress.

The Port of Beaumont Navigation District of Jefferson County, Texas, is the agency which operates and maintains the public wharves of the Port of Beaumont.

Proper maintenance of this waterway is absolutely essential if the marine terminals in our area are to continue operating at maximum efficiency.

We respectfully urge your committee to approve the requested funds.

STATEMENT OF DOW WYNN, PORT DIRECTOR, PORT OF PORT ARTHUR, TEX.

We respectfully urge favorable consideration of F.Y. 1983 Fund-request by Congressman Jack B. Brooks, for the Operations and Maintenance of the Sabine Neches Waterway of Texas and Gulf Intracoastal Waterway of Texas. Only minimally necessary funds are requested, to insure the operation and maintenance of these vital federal waterway projects, and mindful of the need to conserve federal spending, whenever possible.

Our five major refineries on the Sabine Neches Waterway produce ten percent or more of America's energy fuels, relying increasingly on greater numbers of tankers to bring in import crudes, handling domestic and export shipments as well. This Waterway handles 60,000,000 S/T of waterborne commerce annually, among America's ten busiest channels. The security of this nation is dependent on keeping them open and expanding, more than every before.

The Gulf Intracoastal Waterway is also an indispensable link between 150 chemical and petrochemical plants and other refineries, all essential to the nation. Combined tonnage across the Gulf Intracoastal Waterway (60,000,000 tons/annum) is increasing at the rate of 10% annually. Combine plant investment of these essential industries exceeds \$30 billion, just on the Texas segments of the Gulf Intracoastal Waterway, alone.

Please note that no new construction is contemplated in these minimal request. The dollars appropriated are just as vital to our economy and national defense as any monies spent for business stimulation or military procurement purposes..

Your favorable consideration is justified, we submit, and respectfully solicited.

STATEMENT OF JOE BROUSSARD II, PRESIDENT, BOARD OF DIRECTORS, LOWER NECHES VALLEY
AUTHORITY, TEXAS

The Water Resources Development Act of 1976 authorized the Secretary of the Army, acting through the Chief of Engineers, to undertake the Phase I design stage of advanced engineering and design of the Salt Water Barrier in Neches River Basin at Beaumont, Texas.

The Project will provide a gated water structure in the Neches River at Mile 23 near Beaumont; a gated navigation by-pass channel; an access road and levee; and auxiliary dam across a canal which drains an adjacent bayou. The proposed structure will prevent salt water from intruding into the LNVA intake canals as well as provide for free and unobstructed use of the existing navigable portion of the Neches River. The barrier will afford needed water quality protection to municipalities, the large petrochemical industries of Southeast Texas, and irrigation water for rice farmers. The swamp area upstream from the project would be improved for recreational swimming, boating, hunting and freshwater fishing.

Environmental comments from all agencies on this project have been favorable. Favorable environmental statements were given by:

State of Texas
Department of Interior
Department of Agriculture
Department of Transportation
Department of Health, Education and Welfare
Environmental Protection Agency

The General Design Memorandum (GDM) and Final Supplement to the Final Environmental Impact Statement for the Neches River Saltwater Barrier at Beaumont, Texas has been completed in accordance with Section 102(2)(c) of the National Environmental Policy Act, and has been filed with appropriate agencies. Timely funding has enabled the Galveston District to complete an acceptable General Design Memorandum. It is likely that the Galveston Corps of Engineers will be in a posture to initiate construction in fiscal year 1983.

Please insert \$895,000 in the District's budget so that construction of this vital project can be initiated in 1983.

STATEMENT OF MAX DORSETT, GALVESTON COUNTY (TEX.) DRAINAGE DISTRICT NO. 2

Your favorable consideration of the above referenced projects is sincerely requested by the Commissioners of Galveston County Drainage District Number Two.

The continued funding of the Texas City and Vicinity (Hurricane Protection) system is vitally important as the construction is over 90% complete with only the pump station and interior drainage revisions in the La Marque area remaining to be completed.

The continued funding of the Highland Bayou (Construction) which is over 98% complete will conclude a project which has already immeasurably relieved flooding in the watershed.

The North part of the District is served by Dickinson Bayou. The lower reaches have flooded extensively on a regular basis causing very heavy property damage and eliminating highway access. We request your favorable consideration of the Dickinson Bayou (Flood Control and Survey) project to begin defining the corrective actions that will be required.

The Clear Creek watershed area has a significant economic impact on Galveston and Harris counties. The continued regular flooding of the watershed needs to be corrected as soon as possible. Your support of the Clear Creek (Advance Engineering and Design) project will be appreciated.

The Commissioners of Galveston County Drainage District Number Two appreciate your individual efforts to insure the most efficient expenditure of funds available. The completion of the above projects currently under construction, Texas City & Vicinity (Hurricane Protection) and Highland Bayou (Construction) will serve the best interest of the District's constituents and the Texas City industrial area.

STATEMENT OF RAY HOLBROOK, COUNTY JUDGE, GALVESTON COUNTY, TEX.

Galveston County has been the local sponsor with the U.S. Corps of Engineers for the construction of various flood control projects in Galveston County since the first seawall was started in Galveston shortly after the 1900 Hurricane. The Galveston seawall has now been extended in length to approximately 10 miles protecting the most populated part of the City of Galveston. In 1962 (some 14 years after the first local bond issue was passed), construction began on the seawall protecting the cities of Texas City and La Marque from the ravages of hurricanes and high tides of Galveston Bay. In addition, flood control projects have been initiated to prevent flooding along Highland Bayou in the cities of Hitchcock and La Marque, a project on which construction started in 1974, and along Clear Creek in the cities of League City and Friendswood in cooperation with Harris County and Brazoria County, although no construction has yet begun. Galveston County is also the local sponsor for a re-study of the flooding problems on Dickinson Bayou, a bayou which flooded 1,000 homes in 1979.

We appear before this Honorable Committee to urge your support for appropriations for these continuing projects in Galveston County. We do not request appropriations for any new projects and do not anticipate any such requests in the future except for construction funds for Clear Creek, anticipated to be ready for construction in FY 85.

TEXAS CITY-LA MARQUE SEAWALL

Construction of the Texas City-La Marque Hurricane Protection Levee is 100% complete, except for the La Marque pump station just inside the Seawall Dogleg, with construction having started in 1962, right after Hurricane Carla. The estimate for the entire project in 1962 was \$22,600,000 (\$15,700,000, federal; and \$6,900,000, Galveston County). The Federal Government has already invested approximately \$45,000,000 in construction of this seawall, and Galveston County taxpayers have invested nearly \$20,000,000. Upon completion, the total investment in this flood control project will be over \$65,000,000, about four times the 1962 estimate because of inflation.

Galveston County now has funds (about \$2,100,000) for the local share needed to complete the pump station in La Marque as a result of a recent Certificate of Obligation issue to meet the Corps of Engineers' schedule for construction.

Therefore, we urge this Honorable Committee to approve the appropriation of \$2,870,000 in the Administration's 1983 Budget for the La Marque pump station which is the same amount the U.S. Corps of Engineers has stated they are capable of utilizing within the next fiscal year. Construction of the last major section of the seawall project was completed in 1976, and construction of the dogleg along IH 45 in La Marque to the required height of 19 feet is now complete. All that remains is to construct the La Marque pump station, and that will complete the protection around Texas City and La Marque.

HIGHLAND BAYOU FLOOD CONTROL PROJECT

Galveston County first undertook the local sponsorship of the Highland Bayou Flood Control Project in 1960 when a request for a survey by the U.S. Corps of Engineers was initiated. Construction began in 1974 after 14 years of study and engineering. Serious flooding has occurred frequently during this period of time along the Highland Bayou areas which flows through the cities of Hitchcock and La Marque to Galveston Bay, most recently in July and September of 1979. Local bond funds in the amount of \$2,250,000 have been available since 1964, and an additional \$700,000 was voted in 1971.

The first phase of the Highland Bayou Diversion Canal was contracted in 1974 and completed in 1975. The second phase was completed in

1976 with the third and last phase completed at the end of 1981. The remaining work on Highland Bayou is a feasibility study of widening, straightening and desnagging the main channel below the Diversion Dam, and the funds for this study are part of our request.

Therefore, the Galveston County Commissioners Court urges the Committee to approve the appropriation in the Administration's Budget for the Highland Bayou Flood Control Project in the amount of \$300,000 for the next fiscal year so the final phase of this important project can proceed without delay.

CLEAR CREEK FLOOD CONTROL PROJECT

The Galveston County Commissioners Court respectfully urges this Honorable Committee to authorize the \$260,000 which the U.S. Corps of Engineers states is their capability in fiscal year 1983 and recommended by the Administration to conduct advance engineering and design on this most important flood control project in Galveston County, Harris County, and Brazoria County. After 10 years of planning, the Corps of Engineers has made a final engineering decision on the type project to provide flood relief for over 500,000 people in the Clear Creek watershed and still protect the sensitive environment of Clear Creek, and this decision has overwhelming public support as evidenced in a January, 1982, Public Hearing. The three local sponsors (Galveston County, Harris County, and Brazoria County Drainage District No. 4) support the Corps of Engineers' proposal which will accommodate a 10-year flood with the remainder of the 100-year flood plain to be protected by flood plain management. Funds for fiscal year 1983 will allow this final decision to be implemented with detail construction design with construction scheduled for FY 85.

In 1979, over 2,000 homes in Friendswood and League City along Clear Creek were flooded twice, in July from Tropical Storm Claudette and again in September. Several thousand homes were also flooded in Brazoria and Harris counties. Losses from flooding in these three counties from the 1979 floods are well over \$200,000,000. People are desperate to do something--almost anything--on Clear Creek, and the Corps of Engineers is trying to expedite this project. We urge your approval of the \$260,000 recommended for the Clear Creek Flood Control Project.

DICKINSON BAYOU

The Galveston County Commissioners Court is urging this Honorable Committee to approve \$100,000 for the Corps of Engineers to continue a new study of flood control measures on Dickinson Bayou. This is extremely important to Galveston County, inasmuch as over 1,000 homes were flooded along Dickinson Bayou during Tropical Storm Claudette in July of 1979 because of rains in the watershed area from 20 to 40 inches over a 24-hour period. This caused between \$40,000,000 and \$50,000,000 in damages along Dickinson Bayou, and Galveston County is anxious to act as a local sponsor to relieve the flooding conditions. A study was done in the mid-1970's by the Corps of Engineers that found an inadequate benefit-to-cost ratio. However, we believe that extensive construction and development and the possibility of another devastating flood will certainly change the benefits to be derived from flood control measures. We sincerely hope you will favorably consider this very important request.

Thank you for your consideration of these requests and for your time in allowing us to be present at these hearings. We stand ready to assist you in any way and to furnish any additional information you may require.

STATEMENT OF D. P. WHEAT, JR., CHAIRMAN, JEFFERSON COUNTY (TEX.) FLOOD
CONTROL PROJECT COMMITTEE

Thank you for allowing me the opportunity of making this statement in support of the Taylor's Bayou Flood Control Project. I represent a Citizens Committee which successfully passed a bond issue election in 1979 for \$15 million, as the major part of our local share of the project. Please consider the following:

1. Over 39 million dollars in damages to homes, businesses roads and crops occurred as a result of two severe floods in 1979.
2. The local share is committed and the bonds are sold.
3. A favorable public hearing on the Environmental Plan was held in December, in 1980 and resulted in no major changes in the design.
4. The first construction money will be spent this year to eliminate the bottleneck at the outfall and give relief to the entire 640 square mile watershed.
5. I am for reducing Federal Expenditures and balancing our budget. However, Federal funds always seem to end up in flood disaster areas to help cover losses in the form of flood insurance payments, low interest loans, and grants. I believe the same funds should be spent to prevent the loss when possible.

This fund request should be considered as an investment in the future of the petrochemical center of our nation. Further development in our area is hampered by inadequate drainage. I urge your support of this item in the Appropriations Bill for Water Development in Texas.

STATEMENT OF HOMER E. NAGEL, MAYOR, NEDERLAND, TEX.

This is to advise that the City of Nederland is situated in the Ninth Congressional District, Texas, and recommends your consideration of FY 1983 Budget appropriations for the following projects:

<u>PROJECT</u>	<u>FY 1983 BUDGET</u>
Clear Creek (Advance Engineering and Design)	260,000
Dickinson Bayou (Flood Control and Survey)	100,000
Galveston Bay Area (Navigation Survey)	500,000
Highland Bayou (Construction)	300,000
Sabine-Neches Waterway (Operation and Maintenance)	9,152,000
Taylor's Bayou (Construction)	1,700,000
Texas City & Vicinity (Hurricane Protection)	2,870,000
Wallisville (Operation and Maintenance)	65,000

<u>PROJECT</u>	<u>FY 1983 BUDGET</u>
Gulf Intracoastal Waterway (Operation and Maintenance)	12,060,000
Houston Ship Channel (Operation and Maintenance)	11,710,000

In addition we support the following projects not included in the FY 1983 Budget:

<u>PROJECT</u>	<u>FY 1983 BUDGET</u>
Pleasure Island (Survey)	300,000
Neches River Salt Water Barrier (Construction)	895,000
Galveston Harbor and Channel (Operation and Maintenance)	1,200,000

Your consideration of these recommendations is appreciated.

STATEMENT OF EUGENE RASHETA, CHAIRMAN, JEFFERSON COUNTY (TEX.) DRAINAGE DISTRICT No. 7

The Board of Commissioners of Jefferson County Drainage District No. 7 wishes to express its support for the proposed \$1,700,000 provided for in the budget for fiscal year 1983 for construction of the Taylor's Bayou Project.

The project was originally recommended by the Corps of Engineers in 1948, but has seen many delays, the most recent ones for environmental reasons. The Corps of Engineers has worked diligently with the various agencies and local environmental groups to provide a minimum of disruption of the environment by the project, and has thus removed most previous objections.

We believe that what was found to be needed in 1948 is even more necessary now due to growth of this area. Approximately 60% of Jefferson County drains into Taylor's Bayou and its tributaries, and Drainage District No. 7 contributes about 70 square miles of watershed. Drainage is of utmost importance in our area of low, flat terrain with excessive rainfall. The various drainage districts and municipalities have accomplished much drainage work over the years within their respective boundaries, but the downstream outlets through Taylor's Bayou and its tributaries are inadequate to make upstream improvements fully effective. This project is designed to widen and deepen these channels and provide a bypass channel to handle this flow.

In the past two years flood levels in Taylor's Bayou have been responsible for flooding in the upland urban areas, as well as destroying numerous rice crops. This project will help to protect these properties from these periodic floods. Local interests alone cannot finance the downstream improvements outside their boundaries by themselves.

Delays in the project have already increased its cost considerably. Continued delays on a project which ultimately must be done, will increase costs still more.

The local sponsors have passed bond issues or otherwise provided the necessary local funding. We earnestly hope that sufficient federal funding will be provided so that the project may proceed.

The Board of Commissioners of Jefferson County Drainage District No. 7 unanimously requests the Committee's favorable approval of the \$1,700,000 in the proposed 1983 budget.

STATEMENT OF C. S. DeVoy, EXECUTIVE DIRECTOR AND GENERAL MANAGER, PORT OF
GALVESTON, TEX.

We appreciate the opportunity to present this testimony for your consideration in reviewing the relative benefits of three water development projects that are being proposed for the Galveston, Texas area. We will be pleased to furnish any additional information you may require.

We ask favorable consideration for inclusion of these projects in FY 1983 Appropriations. These projects serve Galveston and the surrounding area and are vital to the economic well being of the region. Our Port serves worldwide commerce. The appropriation of the funds for these projects is needed for the continued operation of our port facilities.

GALVESTON BAY AREA NAVIGATION SURVEY

(Investigations)

The \$500,000 included in the President's budget is adequate for the continuation of this study. This study of the future navigation needs of the ports in the Galveston Bay Area is necessary to give information to the federal government for orderly planning of future developments.

GULF INTRACOASTAL WATERWAY

(Operation and Maintenance)

The \$12,060,000 included in the President's budget is adequate for the maintenance dredging of the Gulf Intracoastal Waterway. This waterway is of vital importance to the entire Gulf Coast.

GALVESTON HARBOR AND CHANNEL

(Operation and Maintenance)

The \$1,200,000 additional is being requested for maintenance dredging of the Galveston Entrance Channel. This channel is also utilized by the ports of Houston, Texas City and Baytown, Texas. Maintenance of adequate draft is very important to this port complex.

We thank you, Mr. Chairman, for the opportunity to present this testimony on behalf of these projects.

STATEMENT OF DALE WHITTENBURG, MAYOR, FRIENDSWOOD, TEX.

Friendswood's Mayor and City Council, on behalf of all the citizens of this city, would strongly urge the appropriation of \$260,000 as proposed for advanced engineering and design on the U.S. Corps of Engineers' Clear Creek Project.

This project, which has been under study and consideration for some twenty years, seems now to be at the point of final planning and implementation and without some measures of relief from recurring flooding conditions, the very existence of our communities is threatened.

At a public hearing in December, wherein the Corps of Engineers explained their up-dated plans for rectification of Clear Creek, people throughout the watershed were present and voiced support for the plan. Over the years, while the Corps searched for the best way to alleviate flooding from this particular area, the phenomenal growth in Harris and Brazoria Counties upstream and development within the cities along the Creek was aggravating

the flooding situation. If we are to survive, we must have some relief from the heavy flooding experienced following even an average rainfall. The annual cost in destruction to real property and personal possessions runs into the millions of dollars, while damage to streets and other facilities for which the city is responsible makes a further drain on citizens as taxes have to be increased to cover these losses.

Not to be ignored, though not to be appraised monetarily, is the toll flooding takes on the peace of mind of our citizens, especially the elderly people and the very young children. In some instances, these whom we seek most to protect from traumatic experiences become nervous and highly emotional at the first signs of a heavy rain or electrical storm.

Even from a standpoint of national economics, expenditure of the requested \$260,000 will reap benefits above and beyond the investment in a densely populated, highly commercialized area such as ours.

We respectfully request that you approve the appropriation of these funds in the 1983 Fiscal Budget.

STATEMENT OF DALE G. ANNA, PRESIDENT, CLEAR CREEK (TEX.) DRAINAGE DISTRICT

THE CLEAR CREEK DRAINAGE DISTRICT OFFERS THIS STATEMENT IN SUPPORT OF THE U. S. ARMY CORPS OF ENGINEERS' CLEAR CREEK, TEXAS FLOOD CONTROL PROJECT AND THE REQUEST FOR \$260,000.00 IN FY-1983 FOR ADVANCED ENGINEERING AND DESIGN.

The Clear Creek Texas Flood Control Project is an absolute necessity to the health, safety, and well-being of the people who live in the Clear Creek watershed. As the land in the watershed has undergone development, pastures and farmland have been converted to parking lots, streets, runways, buildings, and other surfaces from which rain water runs off extremely rapidly. Although there have been, and continue to be, improvements made to the drainage arteries in the region by local agencies, consistent with their resources, the effects of land development and subsidence have reached the point that Clear Creek simply cannot carry storm water away to Galveston Bay fast enough to keep water out of our homes. So, until Clear Creek is improved in its water handling capacity, we do not have the ability to make substantial improvement to the flood hazards that our citizens are living with every day.

People here realize that it is not feasible to prevent flooding by a storm like Claudette which struck this area in July, 1979, and dropped 30-40 inches of rain on us in a two-day period. However, our people are getting water in their homes when much less spectacular rains occur -- five-year to ten-year frequency precipitation is causing flooding. Even those people who are not getting water in their homes are impacted, however: street flooding is so severe that emergency vehicles cannot get through. A fire or serious medical problem occurring during, or for many hours after, such rains, would go unanswered in many places.

The Corps of Engineers have devised a plan for improving Clear Creek that is economically sound (benefit to cost ratio of 1.1), environmentally acceptable, and will completely contain the watershed runoff for a ten-year frequency storm. Furthermore, the 100-year flood plain will be reduced by 25% overall. In the watershed, and by as much as 75% in some portions of the watershed. This plan has been presented to the public in this area, and has received overwhelming support. This represents a remarkable increase in public support during the last two years. The Corps of Engineers is in the process of preparing a final report to their office in Washington, D.C., recommending approval of this project. We fervently hope that appropriation of construction funds will be approved and included in the FY-1984 Budget. But in the meantime, the project simple MUST be kept alive by approving FY-1983 funds for Advanced Engineering and Design. The project is not frivolous, nor a conven-

every type of improvement --- it deals with people's safety and health, is the physical and psychological. Many of our people fear rain; anxiety level rises very high when a heavy rain lasts more than a couple of hours, especially when water starts to rise in the streets and into people's yards!

Therefore, we join the Clear Creek Project and respectfully request that the amount be included in the FY 1983 Budget.

STATEMENT OF RON CROWDER, MAYOR, LA MARQUE, TEX.

Your favorable consideration is sincerely requested by the City Council and the citizens of La Marque for the continued funding of the Texas City and Vicinity Hurricane Protection, and the Highland Bayou (Construction) Projects.

Construction of the Texas City and Vicinity Hurricane Protection Levee is 100% complete, except for the La Marque pump station just inside the Seawall Dogleg, with construction having started in 1962, right after Hurricane Carla. The Federal Government has already invested approximately \$45,000,000 in construction of this seawall, and Galveston County taxpayers have invested nearly \$20,000,000. Upon completion, the total investment in this flood control project will be over \$65,000,000.

Galveston County now has funds (about \$2,100,000) for the local share needed to complete the pump station in La Marque.

Therefore, we urge this Honorable Committee to approve the appropriation of \$2,870,000 in the Administration's 1983 Budget for the La Marque pump station which is the same amount the U.S. Corps of Engineers has stated they are capable of utilizing within the next fiscal year. Construction of the last major section of the seawall project was completed in 1976, and construction of the dogleg along IH 45 in La Marque to the required height of 19 feet is now complete. All that remains is to construct the La Marque pump station, and that will complete the protection around Texas City and La Marque. The completion of the pump station is vital to remove storm waters resulting from heavy rainfalls inside the completed levee system. The entire multi-billion dollar petro-chemical complex in Texas City as well as our City of 15,000 persons and their families will be in danger of hurricane damage until the final completion of the "Texas City and Vicinity Hurricane Protection Construction" is completed. Galveston County first undertook the local sponsorship of the Highland Bayou Flood Control Project in 1960 when a request for a survey by the U.S. Corps of Engineers was initiated. Construction began in 1974 after 14 years of study and engineering. Serious flooding has occurred frequently during this period of time along the Highland Bayou areas which flows through the cities of Hitchcock and La Marque to Galveston Bay, most recently in July and September of 1979. The first phase of the Highland Bayou Diversion Canal was contracted in 1974 and completed in 1975. The second phase was completed in 1976 with the third and last phase was completed at the end of 1981. The remaining work on Highland Bayou is a feasibility study of widening, straightening and desnagging the main channel below the Diversion Dam, and the funds for this study are part of our request.

Therefore, we urge this Honorable Committee to approve the appropriation in the Administration's Budget for the Highland Bayou Flood Control Project in the amount of \$300,000 for the next fiscal year so the final phase of this important project can proceed without delay.

As the Texas City and Vicinity Hurricane Protection (Construction) and Highland Bayou (Construction) are reaching the final stages of construction, words cannot express the importance of your favorable consideration in recommending the continued federal funding toward completion of these projects. We, the City Council of the City of La Marque, appear before this Honorable Committee to urge your support for appropriations for these continuing projects in La Marque.

RESOLUTION OF GROVES CITY (TEX.) COUNCIL

WHEREAS, the Groves City Council supports the following public works projects that Congressman Jack Brooks will present before the House Committee on Appropriations and Senator Lloyd Bentsen will present before the Senate Subcommittee on Energy and Water Appropriations:

a) Clear Creek (Advance Engineering & Design)	\$ 260,000
b) Dickinson Bayou (Flood Control & Survey)	100,000
c) Galveston Bay Area (Navigation Survey)	500,000
d) Highland Bayou (Construction)	300,000
e) Sabine-Neches Waterway (Operation & Maintenance)	9,152,000
f) Taylors Bayou (Construction)	1,700,000
g) Texas City & Vicinity (Hurricane Protection)	2,870,000
h) Wallisville (Operation & Maintenance)	65,000
i) Gulf Intracoastal Waterway (Operation & Maintenance)	12,060,000
j) Houston Ship Channel (Operation & Maintenance)	11,710,000
k) Pleasure Island (Survey)	300,000
l) Neches River Salt Water Barrier (Construction)	895,000
m) Galveston Harbor & Channel (Operation & Maintenance)	1,200,000

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF GROVES, TEXAS:

THAT this body does hereby go on record as wholeheartedly supporting the above listed projects for funding in the 1983 Fiscal Year Budget; and

BE IT FURTHER RESOLVED that a copy of this Resolution be furnished Congressman Jack Brooks, Senator Lloyd Bentsen, and members of the House and Senate Subcommittees as evidence of the Groves City Council's support.

PASSED, APPROVED and ADOPTED this 15th day of March, 1982.

STATEMENT OF SAM O. SMITH, PRESIDENT, JEFFERSON COUNTY (TEX.) DRAINAGE
DISTRICT No. 6

For a number of years the Taylors Bayou Drainage and Flood Control Project has been going through the study and planning stages and being reviewed by various environmental agencies whose approval was needed before actual rights-of-way acquisition could begin. With the current purchase of land plus additional purchases anticipated the construction phase is finally nearing reality.

To support this badly needed and long overdue project that will aid in relieving many of the drainage and flooding problems experienced in the past and currently existing in much of the entire county, federal assistance is paramount. In keeping with this philosophy, over \$1,000,000.00 has already been allocated toward construction and start-up costs during the current fiscal year and another \$1.7 million is proposed in the budget presently under review and consideration, all for which we are most appreciative. However, recent conversations with the District Offices of the U. S. Army Engineers has revealed that their capability has expanded to provide for the management of \$2.7 million or \$1,000,000.00 more than currently proposed.

Because of the urgent and pressing need for this project to move forward toward solving many of the flooding problems suffered by residents and property owners throughout Jefferson County, you are urged to approve the \$2.7 million that the U. S. Army Engineers can effectively and efficiently manage for construction in the forthcoming fiscal year.

The local sponsors of the project who are responsible for the acquisition of all lands needed plus other fees and charges took this issue to the voters several years ago with the results being that over \$15,000,000 in local bonds were approved for their share of the costs. These bonds have been subsequently sold and the proceeds are presently available and being used for the intended purposes.

All environmental concerns have been addressed and recently the Texas Parks and Wildlife Department agreed to the sale of 96 acres of their land for levee relocation and channel construction. This in itself was a major step forward for the project.

Realizing that actual readiness to begin construction has been somewhat slow in coming but also being aware that the majority of obstacles have been met and resolved, we feel justified and confident in our request for your approval of \$2.7 million for this project and your positive response is solicited.

It is anticipated that bids will be let by the Corps of Engineers in late spring or early summer of this year with actual construction to begin shortly thereafter.

Thank you for this opportunity to briefly outline the importance of and the local commitment to the Taylors Bayou Drainage and Flood Control Project for Jefferson County, Texas and to ask for your support and funding.

On two other matters of interest to Jefferson County and Southeast Texas, we urge your approval of proposed funding of the Sabine-Neches Waterway (Operation and Maintenance) \$9,152,000, and we request your consideration in adding funding for the Neches River Salt Water Barrier (Construction) \$895,000. Both of these projects are extremely important to the citizens of this area.

STATEMENT OF R. P. LEBLANC, JR., COUNTY JUDGE, JEFFERSON COUNTY (TEX.)
COMMISSIONERS' COURT

Commissioners' Court of Jefferson County, Texas, would like to go on record in support of the following projects which pertain to Jefferson County to be presented on Wednesday, March 31, 1982, by Senator Lloyd Bentsen:

- (1) Sabine-Neches Waterway
- (2) Taylors Bayou
- (3) Gulf Intracoastal Waterway

It is our opinion that such projects should be included in the 1983 budget as these projects are vital to our area and are in the best interest of the citizens of Jefferson County.

RESOLUTION OF CITY COMMISSION OF HITCHCOCK, TEX.

At regular meetings of the City Commission of the City of Hitchcock, the Highland Bayou Flood Control Project has been discussed, by UNANIMOUS VOTES, resolutions were passed:

BE IT THEREFORE, RESOLVED by the City Commission of Hitchcock, Texas, that the City Commission speaking in and on behalf of the citizens of Hitchcock, Texas do hereby respectfully request of the Committee on Appropriations for both the United States Senate and the House of Representatives appropriations for the continuation of the lower channel of the Highland Bayou Flood Control Project in Galveston County, Texas.

Failure to complete this project will result in the continued damage to property as a result of continued flooding causing some of our citizens undue hardship.

THEREFORE, the City Commission of the City of Hitchcock, Texas, respectfully requests and urges this committee to appropriate the requested and necessary funds to continue the Highland Bayou Flood Control Project.

DATED this 19th day of March, 1982.

STATEMENT OF EMMETT F. LOWRY, MAYOR, TEXAS CITY, TEX.

On behalf of the City Commission and the citizens of Texas City, we sincerely request your support for adequate appropriations toward completing the remaining Texas City-LaMarque Hurricane Protection Levee.

No action on the Texas City-LaMarque Hurricane Protection Project would nullify the benefits to be derived from the expenditures exceeding Forty Million Dollars to date spent by the Federal Government and by Galveston County. The entire multi-billion dollar petro-chemical complex, as well as our City of 42,000 persons and their families will be in danger of hurricane damage until the final completion of the "Texas City and Vicinity Hurricane Protection Construction" is completed. Therefore, it is for this reason we strongly recommend to the Committee authorization for the 1983 fiscal year appropriations.

Residents of the Santa Fe-Hitchcock and Dickinson and Clear Creek areas were flooded repeatedly in 1979 because of heavy rainfall and the lack of completion of the Highland Bayou Diversionary Canal and the need for expanding of Dickinson Bayou and Clear Creek. We respectfully request your favorable consideration of funds needed for these projects to relieve the suffering and tremendous property losses of citizens of these areas of Galveston County, and into South Harris County.

Should you have any specific questions pertaining to these projects, we will be most willing to cooperate in providing any information we have available for the use of your Committee.

STATEMENT OF MAURICE MEYERS, MAYOR, BEAUMONT, TEX.

TAYLORS BAYOU PROJECT, 9TH DISTRICT

On behalf of the City of Beaumont, I respectfully request that continued favorable consideration be given to the Taylors Bayou project, which has been scheduled for discussion before your subcommittee.

Taylors Bayou is an integral part of a major drainage system upon which 80 per cent of this community and 60 per cent of Jefferson County must rely for drainage and flood protection.

Completion of the Taylors Bayou project, because of the interdependent nature of this drainage system, will allow this City's existing facilities to operate effectively and realistically offers the only means by which this municipality can successfully address the perennial threat of serious flood damage such as that which was experienced in April of 1979, that resulted in a disaster area designation.

I wish to express my appreciation to the Subcommittee for affording our Senator, Lloyd Bentsen, the time to appear before you to present our request on this vital project.

NECHES RIVER SALT WATER BARRIER, 9TH DISTRICT

Over the years, the intrusion of salt water up the Neches River has progressively become more pronounced in terms of frequency and severity.

The Neches River, which serves as the primary source of fresh water for the City of Beaumont and the local water authority, becomes contaminated and unuseable during periods of salt water intrusion.

The Neches River Salt Water Barrier Project which has been scheduled for discussion before your subcommittee will, upon completion, afford us a reliable fresh water supply and permit us to provide water to our citizens in a more cost-effective manner. Additionally, the project will improve the fish and wildlife habitat and related recreational activities.

Our community will greatly appreciate your subcommittee's favorable consideration of this project.

STATEMENT OF JAMES BURNS, PRESIDENT, GREATER PORT ARTHUR (TEX.)
CHAMBER OF COMMERCE

SABINE-NECHES WATERWAY

We, the Board of Directors of the Greater Port Arthur Chamber of Commerce, request approval of the \$9,152,000 appropriation for the operation and maintenance of the Sabine-Neches Waterway for fiscal year 1983.

Our area is of significant importance to the Nation by the fact that nearly 11.3% of the Nation's refined petroleum products are transported through our complex of refineries. Today, refineries are relying more and more on larger and greater numbers of tankers to bring in vitally needed imported crude and to handle export and domestic shipments as well.

We respectfully request your favorable consideration to the request for \$9,152,000 for the operation and maintenance of the Sabine-Neches Waterway for fiscal year 1983.

TAYLOR BAYOU

We, the Directors of the Greater Port Arthur Chamber of Commerce, request approval of the proposed \$1,700,000 appropriation for Taylor Bayou Construction Project for fiscal year 1983.

This project dates back to 1946, and as you well know construction costs have soared since that time. We feel that this will benefit our community, not only from an economic standpoint but also from a drainage standpoint. It is essential that drainage protection be provided for our area.

Therefore, we respectfully urge your committee to approve funds proposed for the forthcoming fiscal year.

GULF INTRACOASTAL WATERWAY

We, the Board of Directors of the Greater Port Arthur Chamber of Commerce, request your favorable consideration of the \$12,060,000 appropriation for the operation and maintenance of the Gulf Intracoastal Waterway for the fiscal year 1983.

The Gulf Intracoastal Waterway of Texas is an indispensable link between area refineries, chemical and petrochemical plants, all of which are absolutely essential to the security as well as the economical well being of our Nation today.

Few, if any, waterways in America contribute more to the American economy, to our strengthened relations with a peaceful world, and toward achieving a better balance of trade than the Gulf Intracoastal Waterway of Texas.

We, therefore, respectfully request your favorable consideration of this \$12,060,000 appropriation.

PLEASURE ISLAND

We, the Board of Directors of the Greater Port Arthur Chamber of Commerce, request your favorable consideration to include a \$300,000 appropriation for surveying the erosion problem of Pleasure Island. Currently, Pleasure Island is continuing to erode into the Sabine-Neches Ship Channel. This natural erosion places a greater need for continued maintenance dredging of the Channel more frequently.

The erosion problem is currently threatening Texas Highway 82 which links Port Arthur, Texas to Cameron, Louisiana. Pleasure Island holds great potential for future recreational and industrial development for the Greater Port Arthur area and also serves as a natural wave barrier for the protection of Port Arthur.

We, therefore, request your favorable consideration of this \$300,000 unbudgeted item be included in the FY '83 Budget.

COLORADO RIVER BASIN ISSUES

STATEMENT OF JOHN F. SULLIVAN, SECRETARY-TREASURER, COLORADO RIVER ENERGY DISTRIBUTORS ASSOCIATION

ACCOMPANIED BY DON ALLEN, ATTORNEY

Senator SCHMITT. The hearing will come to order again. I apologize for the actions of the Senate today, but there is not much we can do about it.

Our next witness will be Mr. John Sullivan, secretary-treasurer of the Colorado River Energy Distributors Association.

Mr. Sullivan, welcome.

Mr. SULLIVAN. Thank you. I am John Sullivan, secretary-treasurer of the Colorado River Energy Distributors Association, or CREDA. I am also manager of the system planning on the Salt River project in Phoenix, Ariz. I have with me this afternoon Don Allen, an attorney for CREDA.

I will summarize my comments for you.

Senator SCHMITT. Please do, because I cannot tell you when we will be interrupted again with another vote.

Mr. SULLIVAN. On behalf of CREDA, I wish to thank the chairman and the members of the subcommittee for the opportunity to appear before you in support of certain aspects of the administration's fiscal 1983 budget.

CREDA is a nonprofit Colorado membership corporation comprised of 17 publicly owned electric utility systems, organizations of publicly owned electric utility systems, and State agencies located in the Colorado River Basin States of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming. A complete list of CREDA's members is attached for your reference.

With respect to the Colorado River storage project, CREDA supports the fiscal year 1983 budget submitted by the President as it relates to appropriations of funds to continue the construction and operation of the Colorado River storage project and participating projects.

Because of the projected growth in demand for electric power and energy and the current administration's emphasis on meeting the energy and water requirements in the West, continued or increased funding of these projects is vitally important. Requested levels of funding appear to be adequate to meet these needs. For this reason, CREDA fully endorses the President's request for funding of these projects.

With respect to the Western Area Power Administration, CREDA wishes to support budget appropriations which will enable Western to effectively carry out its Federal power marketing obligations in cooperation with its customers and without duplication of facilities.

COLORADO RIVER AUGMENTATION DEMONSTRATION PROGRAM

Finally, we wish to call the subcommittee's attention to one last area of concern. The Bureau of Reclamation has currently requested \$4.3 million for fiscal year 1983 funding of its atmospheric water resources management program. Part of this program includes the Colorado River

augmentation demonstration program which is designed to demonstrate the augmentation potential of the Colorado River.

In his appearance before this subcommittee on March 16, Commissioner Broadbent explained that the Bureau is seeking cooperation from the Colorado River Basin States on funding from power revenues to pay for this demonstration project. It is CREDA's understanding that the Bureau may seek congressional authority to allow for an increase of Western's power rates to a level that would require power users, such as the members of CREDA, to pay the total costs of the demonstration program.

We understand that the Colorado River Basin States have not yet agreed on a method to allocate any additional water as produced through weather modification. Moreover, we understand that the benefits of an increased Colorado River water supply may accrue not only to energy users, but also to municipal and irrigation water users.

Unless and until an equitable arrangement for allocating the costs of the Colorado River augmentation demonstration program can be designed, based upon benefits arising from the program and accepted by those affected by the program, and until the program has been developed to the point where it is no longer an experimental effort, CREDA believes the Federal Government should continue appropriations as required to carry out its funding of this program as contemplated in the Bureau's original budget request.

CREDA, therefore, supports the Bureau's original budget request of February 8, 1982, for this program. On behalf of the Colorado River Energy Distributors Association, I want to thank you for the opportunity to present this statement. CREDA, or its individual members, would be pleased to provide any supplemental testimony as requested by the members of this subcommittee or any other Members of Congress.

Thank you.

Senator SCHMITT. Thank you, Mr. Sullivan. And your friends in New Mexico, who are the Plains Electric Generation and Transmission Cooperation, indicate their support of the testimony that you have made today. We appreciate it very much.

Mr. SULLIVAN. Thank you.

Senator SCHMITT. I will go and vote at this time, and either I or Senator Burdick, I understand, will return shortly to continue the hearing.

[A brief recess was taken.]

[The statement follows:]

STATEMENT OF JOHN F. SULLIVAN, SECRETARY-TREASURER, COLORADO RIVER ENERGY
DISTRIBUTORS ASSOCIATION

I am John F. Sullivan, Secretary-Treasurer of the Colorado River Energy Distributors Association ("CREDA"). I am also Manager, System Planning, Salt River Project. My business address is P. O. Box 1980, Phoenix, Arizona 85001.

On behalf of CREDA, I wish to thank the Chairman and Members of this Subcommittee for the opportunity to appear before you in support of certain aspects of the Administration's FY 1983 Budget. Specifically, my testimony will be directed at requests for appropriations for the Western Area Power Administration and for the Bureau of Reclamation's Colorado River Storage Project and Atmospheric Water Resources Management Program.

CREDA is a non-profit Colorado membership corporation comprised of 17 publicly-owned electric utility systems, organizations of publicly-owned electric utility systems, and state agencies located in the Colorado River Basin States of Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming. A complete list of CREDA's members is attached for your reference.

CREDA represents statutory preference customers which purchase over 90 percent of the electric power and energy produced by the Colorado River Storage Project plus significant portions of the Boulder Canyon and Parker-Davis Projects, as marketed by the Western Area Power Administration ("Western"). CREDA's members render electric service to tens of thousands of rural, residential, commercial and industrial customers.

Colorado River Storage Project

CREDA supports the fiscal year 1983 budget submitted by the President as it relates to appropriations of funds to continue the construction and operation of the Colorado River Storage Project and participating projects. Because of projected growth in demand for electric power and energy and the current Administration's emphasis on meeting the energy and water requirements in the West, continued or increased funding of these projects is vitally important. Requested levels of funding appear to be adequate to meet these needs. For this reason CREDA fully endorses the President's request for funding of these projects. Should the currently requested level of funding prove insufficient upon closer examination during these hearings, however, then CREDA would further support any increased appropriation or additional funds to continue construction and operation of these projects at an accelerated or increased level as this Subcommittee or the Congress may deem necessary.

Western Area Power Administration

Because of CREDA's relationship with the Western Area Power Administration, CREDA also wishes to support budget appropriations which will enable Western to effectively carry out its federal power marketing obligations in cooperation with its customers and without duplication of facilities.

Atmospheric Water Resources Management Program

Finally, we wish to call the Subcommittee's attention to one last area of concern. The Bureau of Reclamation has currently requested \$4.3 million for FY 1983 funding of its Atmospheric Water Resources Management Program. Part of this program includes the Colorado River Augmentation Demonstration Program, which is designed to demonstrate the augmentation potential of the Colorado River.

In his appearance before this Subcommittee on March 16, 1982, Commissioner Robert N. Broadbent of the Bureau of Reclamation explained that the Bureau is seeking cooperation from the Colorado River Basin states on funding from power revenues to pay for this demonstration project. It is CREDA's understanding that the Bureau may seek Congressional authority to allow for an increase of Western's power rates to a level that would require power users such as the members of CREDA to pay the total costs of the demonstration program.

We understand that the Colorado River Basin states have not yet agreed on a method to allocate any additional water as produced through weather modification. Moreover, we understand that the benefits of an increased Colorado River water supply may accrue not only to energy users but also to municipal and irrigation water users.

Unless and until an equitable arrangement for allocating the costs of the Colorado River Augmentation Demonstration Program can be designed based upon benefits arising from the program and accepted by those affected by the program and until the program has been developed to the point where it is no longer an experimental effort, CREDA believes the Federal Government should continue appropriations as are required to carry out its funding of this program as contemplated in the Bureau's original budget request. CREDA therefore supports the Bureau's original budget request of February 8, 1982 for the Colorado River Augmentation Demonstration Program and the Atmospheric Water Resources Management Program.

Mr. Chairman, as you can see from this testimony, CREDA strongly supports the present Administration's budget requests for continued planning, construction and operation of Colorado River Storage Project facilities and for appropriations to allow Western to continue delivering federally-generated power to preference customers as required by Congress. CREDA likewise supports the original request by the Bureau of Reclamation for appropriations to fund the Bureau's Atmospheric Water Resources Management Program and the related Colorado River Augmentation Demonstration Project. CREDA would also support any efforts by this Subcommittee or others to increase the appropriations levels over those requested, if such an increase is found to be necessary to continue these programs and projects at their current pace of development and operation.

On behalf of the Colorado River Energy Distributors Association, thank you for the opportunity to present this statement. CREDA or its individual members would be pleased to provide any supplemental testimony as requested by the members of this Subcommittee or any other members of Congress.

COLORADO RIVER ENERGY DISTRIBUTORS ASSOCIATION MEMBERS

Arizona Municipal Power Users Association.
 Arizona Power Authority.
 Arizona Power Pooling Association.
 City of Farmington, N. Mex.
 City of Truth or Consequences, N. Mex.
 Colorado Association of Municipal Utilities.
 Colorado River Commission of Nevada.
 Intermountain Consumer Power Association.
 Irrigation and Electrical Districts Association of Arizona.
 Navajo Tribal Utility Authority.
 Plains Electric Generation and Transmission Cooperative, Inc.
 Platte River Power Authority.
 City of Provo, Utah.
 Salt River project.
 Strawberry Water Users Association.
 Tri-State Generation and Transmission Association.
 Wyoming Municipal Power Agency.

STATEMENT OF HON. LLOYD M. BENTSEN, U.S. SENATOR FROM TEXAS

Senator BENTSEN. Thank you very much.

Mr. Chairman, as I testify before this subcommittee, I can think of no resource that is more important to be properly managed than the resource of water. As a Senator from New Mexico, I know you share that concern with me. Water's importance to the Nation's commerce is an effective port system, without which we cannot compete. Water is a key element in our national transportation system, and our inland waterways are critical to our network of commerce. Water is an energy source, and it is a compelling component of energy production. But, most importantly, water is survival; it is the difference between drought and plenty. It is the difference between a breadbasket and a dustbowl.

Its controlled use can bring about prosperity. Failing to control its flow can result in flood, devastation, and disaster. This Nation has long recognized its need to preserve and enhance its water resources and we must continue to commit our efforts to these resources in the future.

If we do not, we are going to see a crumbling of the infrastructure of this country. I can understand slowing down new water projects, but I sure cannot understand stopping them.

If we do not face up to this reality, we are going to face a certain crisis. Yet in real terms, we are spending half of what we spent 15 years ago.

Mr. Chairman, I have long supported wise and effective reductions in Federal spending. It is essential that we work toward a balanced budget to improve the economy, but it is equally as important to continue to invest in the future and to maintain those investments.

Mr. Chairman, I strongly support the President's request for fiscal year 1983 for each of the Texas projects. There are areas where I believe additional funds are necessary, and I have provided some detailed information in my written testimony. I really want to thank you for the time you have dedicated to this, Mr. Chairman, and I know we just left another committee where we were working together, the Intelligence Committee. We have two committees going at the same time. That is part of the smooth efficiency of the Senate. [Laughter.]

I think what I have said only gives you part of the picture. The people in this room are the grassroots reality. As I look around this room, I see many friends from the Trinity River Improvement Association, the Trinity River Authority, the Brazos River Authority, the Brazos River Harbor and Navigation District, the Port of Corpus Christi, the Gulf Intracoastal Waterway, and many others.

Mr. Chairman, these are the people I listen to when it comes to water resources and I recommend your listening to them.

Thank you.

Senator SCHMITT. Well, thank you, Senator. Your entire testimony will be in our record.

Senator BENTSEN. I have provided the details, but thank you very much.

Senator SCHMITT. We will listen very carefully to the input of your constituents and others.

[The statement follows:]

STATEMENT OF SENATOR BENTSEN

MR. CHAIRMAN, as I testify before this Subcommittee, I can think of no resource that means more to this country than the wise use of its water resources. Water is the door to this nation's commerce. Without an effective port system we cannot compete. Water is a key element of our national transportation system. Our inland waterways are critical to a balanced network of commerce. Water is an energy source and a compelling component of energy production. But most importantly, water is survival. It is the difference between drought and plenty. It is the difference between a bread basket and a dust bowl.

It's controlled use can bring prosperity. Failing to control its flow can result in devastation and disaster.

This nation has long recognized the need to preserve and enhance its water resources. We must continue to commit our efforts to these resources in the future. If we do not, we will face a certain crisis. Yet, in real terms we are spending half of what we spent fifteen years ago.

Mr. Chairman, I have long supported wise and effective reductions in federal spending. It is essential that we move toward a balanced budget and improve the economy. But is equally important to continue to invest in the future and to maintain those investments. Mr. Chairman, I strongly support the President's budget request for Fiscal Year 1983 for each of the Texas projects. However, I want to specifically note certain projects.

Under "Surveys", the Colorado River and Tributaries, Boggy Creek at Austin, project is included. The budget request is \$350,000. I join with Congressman J.J. Pickle in recommending this funding level. The project is necessary to control flooding on Boggy Creek as it flows through poorer neighborhoods of the city. However, it contains a sound benefit to cost ratio of 1.3.

Under "Advanced Engineering and Design", Millican Lake is requested at \$600,000. This is full capability and is clearly justified. Millican Lake on the Brazos River represents an urgently needed facility to meet present as well as future water demands. Essentially all of the long-term water supply yields of all the lakes in the Brazos River Authority's basin wide water supply system are committed. Millican Lake offers the best feasible source of additional water supplies necessary to meet present and future water needs.

Under "construction", there are three projects I wish to highlight. First, the Cooper Lake Project is necessary to supply water to much of Northeast Texas. It has been delayed by litigation. The Environmental Impact Statement has now been revised and this project should begin moving again. The budget request includes \$1,500,000 for Cooper Lake. This is full capability and should be included in the final appropriations bill. Cooper Lake was authorized in the 1950's; water needs in this area will be compelling in the mid-1980's. This project should be delayed no longer than is absolutely necessary.

Second, the project to deepen the Freeport, Texas, Harbor deserves consideration by this committee. Two years ago, the Congress acted to allow the Corps of Engineers to receive up to \$10,000,000 in funds submitted by local sponsors of this project. It continues to be one of the best projects to be presented to the committee with a benefit/cost ratio well above 6 to 1. Even though the Corps is allowed to receive these funds to begin construction on this project, the Administration is seeking to assure some up-front financing by the local interests. The local interests have proposed to pay 50% of the cost for upgrading and reworking of the jetties. This represents a major departure from traditional port funding. Still, it is my understanding that the Administration has rejected the proposal as inadequate. Because this project has appeared so desirable, the Corps has

deferred needed maintenance of the port jetties to the point that Corps officials now predict that they will collapse in the event of a hurricane and block the channel. Such an event would render the nation's Strategic Petroleum Reserve facilities at Freeport largely useless in the event of a national emergency. I would urge the committee to closely examine the testimony of the Brazos River Harbor Navigation District and to consider the inclusion of some funding for this project in the Fiscal 1983 appropriations bill.

Third, the Mouth of the Colorado Project is not budgeted in Fiscal 1983. However, the Corps indicates it has a capability of \$3 million dollars for this project. Congress appropriated \$2.6 million dollars for Fiscal 1981 for the Mouth of the Colorado River Project. However, because the formal section 221 agreement had not been signed, \$2.15 million dollars were diverted from this project to be used elsewhere. Now the appropriate documents have been included and the project is ready to move again. The Corps of Engineers indicates that these documents were signed after it was too late to consider resumption of the project in the President's Fiscal Year 1983 budget. I would urge the Committee to continue the path that Congress has begun on this project and include construction funding in the final appropriations bill.

Under "operation and maintenance", I am specifically concerned that the Administration has proposed to cut a needed \$150 million dollars from the Corps of Engineers navigation maintenance budget. In particular, I have been informed that this cut would mean zero funding for the Brazos Island Harbor facility at Brownsville, Texas. The Corps indicates that it has a capability of \$3.497 million dollars to undertake O & M efforts at Brazos Island Harbor. I would encourage this committee to reject the proposed \$150 million dollar penalty to those port facilities that the Administration has suggested and in the course of doing so include necessary funds for Brownsville, Texas.

Turning from the Corps of Engineers projects, I want to address the Bureau of Reclamation effort. I continue to support adequate funding for the Bon Wier Project, the Nueces River (Choke Canyon) project, the Palmetto Bend Project, the San Angelo Project, the Delta Lake Irrigation District (loan) program, and the Hidalgo County Improvement-- Districts 1, 2, and 5 (loan) programs. In addition I note that the Bureau of Reclamation is beginning a new water supply study at or near Columbus Bend of the Colorado River. This is an appropriate study to undertake.

Finally, I am concerned that the Bureau has apparently eliminated the HIPLEX program to promote rain fall in the water limited areas of the southwest and midwest. I must conclude that this is a serious omission when these areas are faced with such severe water crisis problems over the next decades.

CORPUS CHRISTI SHIP CHANNEL, TEXAS

STATEMENT OF HARRY G. PLOMARITY, PORT DIRECTOR, PORT OF CORPUS CHRISTI, CORPUS CHRISTI, TEX.

ACCOMPANIED BY:

DUANE ORR, VICE PRESIDENT, GULF INTRACOASTAL CANAL ASSOCIATION

DALE MILLER, PRESIDENT, GULF INTRACOASTAL CANAL ASSOCIATION

HEARING PROCEDURE

Senator SCHMITT. The hearing will come to order. I apologize for the Senate and for one member of the subcommittee, particularly, for having fouled up the afternoon the way it has happened. What I will do is let each of you that has not testified submit your testimony for the record.

If you wish to present your testimony orally, I will have to leave you in the tender mercies of the staff who are really very nice and won't bite a bit. So, I will let you make that decision, but your entire written testimony will be put into our record, and if you wish to present oral testimony, that will be taken as well.

I apologize again, but those are our constraints. Unfortunately, we have to operate under those when things get out of control on the Senate floor.

Mr. CROW. For the record, my name is Steve Crow. I am on the subcommittee staff. If it is agreeable, we will proceed through the witness list and I will give everybody an opportunity to submit their written testimony if they would prefer to do that.

The first witness is Mr. Harry Plomarity, port director, Port of Corpus Christi.

Mr. PLOMARITY. My name is Harry Plomarity and I am the port director of the Port of Corpus Christi, Corpus Christi, Tex. With me today is Duane Orr, vice president, and Dale Miller, president of the Gulf Intracoastal Canal Association.

I appear before you this morning urging the appropriation of the following funds for fiscal year 1983.

First, the continued construction of authorized improvements to the Corpus Christi Ship Channel, \$6 million; second, to continue the operation and maintenance of the Corpus Christi channel project during fiscal year 1983, \$7.185 million. Details of the projects and information supporting our request have been made part of the written statements which have been submitted to the subcommittee. But in the essence of time, let me just say that the Port of Corpus Christi in 1981 handled over 50 million tons of waterborne commerce.

The future growth of the port is dependent upon the continued congressional funding for 1983 for maintaining and improving the ship channel to accommodate larger ships and increased traffic.

We appreciate the opportunity of appearing before you this afternoon and we ask for your continued support.

Thank you very much.

Mr. CROW. Thank you very much.

GULF INTRACOASTAL CANAL

Mr. MILLER. My name is Dale Miller. I am the president of the Gulf Intracoastal Canal Association with principal offices in Houston. Our association have been members of the organization for a long period of years under the auspices and have been related to the Intracoastal Waterway, a complex system on the Mexican border through the west coast of Florida. There are many projects involved in that system and many are represented here in the requests appearing before you, so I will not encumber the record with repetitious testimony.

PREPARED STATEMENTS

I would simply ask that my statement be included in the record following that of Mr. Plomarity. This will conclude my oral testimony, except I want to associate myself with the remarks of Mr. Plomarity of Corpus Christi and with the Trinity River delegation who will follow.

Thank you very much.

[The statements follow:]

STATEMENT OF HARRY G. PLOMARITY, PORT DIRECTOR, PORT OF CORPUS CHRISTI, TEX.

My name is Harry G. Plomarity and I am Port Director for the PORT OF CORPUS CHRISTI AUTHORITY of Corpus Christi, Texas, the local sponsor for the federally authorized CORPUS CHRISTI SHIP CHANNEL, TEXAS, PROJECT.

REQUEST FOR FUNDS

I appear before you today urging that the 97th Congress, 2nd Session, appropriate the following funds for FY83:

A. CONTINUE CONSTRUCTION OF AUTHORIZED IMPROVEMENTS

\$6,000,000 to continue the improvements to the CORPUS CHRISTI SHIP CHANNEL in accordance with the authorized 45-Foot Project (Senate Document No. 99 - Public Law 90 - 483 dated August 13, 1968). This amount is the Corps' capability, which is \$2,000,000 more than in the President's budget.

B. OPERATION AND MAINTENANCE OF THE WATERWAY

\$7,185,000 to continue the operation and maintenance of the CORPUS CHRISTI CHANNEL PROJECT during FY83. This amount is the same as the President recommended.

UNCOMPLETED IMPROVEMENTS TO THE CORPUS CHRISTI SHIP CHANNEL

The following authorized improvements have yet to be completed:

1. Deepening the Corpus Christi Inner Harbor from Beacon 82 (Mile 21.90) outside the Corpus Christi Harbor Bridge to and including the Viola Turning Basin (Mile 31.60) from its present depth of 40 feet to the authorized depth of 45 feet.
2. Widening the Tule Lake and Viola Channels from the present 200-foot bottom width to the authorized 300-foot bottom width.
3. Enlarging the Chemical, Tule Lake and Viola Turning Basins to provide a minimum turning diameter of 1,200 feet.
4. Completing the construction of three lay berths along the channel near Port Ingleside, and adding three (3) additional berths.

STATUS OF AUTHORIZED IMPROVEMENTS TO THE CORPUS CHRISTI SHIP CHANNEL

All improvements to the Corpus Christi Ship Channel (formerly Port Aransas - Corpus Christi Waterway) Project authorized prior to the 90th Congress, 2nd Session, are essentially complete. Table No. 1 below shows the existing completed and the authorized dimensions for the respective reaches of the Project.

DESCRIPTION OF ACTIVITIES AND PLANNING IN PROGRESS

1. DREDGING OF THE INNER HARBOR - 45-FOOT PROJECT

Completion of the authorized 45-Foot Corpus Christi Ship Channel Project is awaiting the Corps' development of an acceptable plan for disposal of the dredged material and providing appropriate mitigation measures to satisfy the environmental agencies. The Corps, after having its July 1975 50-year disposal plan termed unacceptable by the environmental agencies, began developing a plan to use upland farmland to contain the shoaling that would periodically be removed from the Inner Harbor. From a Corps' scoping meeting held early in 1980, the farmers learned of the proposal to use farmland on the north shore of Nueces Bay as disposal sites for the new work and maintenance dredging of the Project.

TABLE NO. 1
CORPUS CHRISTI SHIP CHANNEL
Existing and Authorized Waterway Dimensions
(As of March 1, 1982)

Section of Waterway	Existing Dimensions (in feet)		Authorized Dimensions (in feet)	
	Depth MLT	Bottom Width	Depth MLT	Bottom Width
Outer Bar Channel	x	x	47	700
Jetty Channel:				
Outer End Jetty Channel to Jetty Entrance	x	x	47 to 43	700 to 600
Between Jetties	x	x	43	600
Inner Basin at Harbor Island	x	x	45	730 to 1720
Inner Basin to Ferry Landing at Port Aransas	x	x	45	600
Port Aransas to La Quinta Channel Junction	x	x	45	300
Mooring Area - Port Ingleside	x	x	45	150
La Quinta Junction to Corpus Christi	x	x	45	400
La Quinta Channel	x	x	45	300
La Quinta Turning Basin	x	x	45	800x1200
Corpus Christi Turning Basin	40	1000	45	800
Industrial Canal	40	400	45	400
Avery Point Turning Basin	40	1000	45	975x1050
Tule Lake Channel (Avery Point to Chemical turning Basin)	40	350	45	400 min.
Chemical Turning Basin	40	920 dia.	45	1200 dia.
Tule Lake Channel (Chemical Basin to Tule Lake Basin)	40	200	45	300
Tule Lake Turning Basin	40	900	45	1000x1200
Viola Channel (Tule Lake Basin to Viola Basin)	40	200	45	300
Viola Turning Basin	40	700 to 900	45	1200 dia.

x Waterway completed to authorized dimensions

Farming interests immediately contacted the Secretary of Agriculture, Senators Tower and Bentsen and Representative Wyatt, expressing strong opposition to the use of prime farmlands as disposal sites. Because of these concerns, the Senators and Congressman called a meeting on July 29, 1980, of all federal agencies involved in the decision making on this federally authorized Project. At this meeting it was agreed that the agencies would cooperate in developing an acceptable disposal plan no later than July, 1981, to accommodate the estimated volume of dredged material that the Project would generate during the next 50 years. It was also agreed that the Corps of Engineers would be the lead agency.

The Corps developed a "tentative recommended plan" pursuant to the above meeting. It was the subject of a public hearing on September 19, 1981. This plan provided for the use of 2,240 acres of Nueces Bay bottoms with these bay bottom losses to be mitigated. Local governmental agencies, the Governor, the U.S. Senators from Texas, and many private citizens strongly supported the Corps' plan. Opposition to the plan came from the environmental groups. While the District Engineer was preparing the Final Environmental Statement, the Southwest Division Engineer began negotiating with the federal agencies. Indications are that the General will further modify the District Engineer's plan.

Presently, it is planned to deposit additional dredged material in four previously used federal upland disposal areas, adding two upland disposal sites and using about 1,200 acres of Nueces Bay water bottoms to contain the 68.0 MCY's of dredged material that is expected over the life of the plan. This plan is an acceptable solution as far as the Port Commission is concerned. The federal agencies have agreed not to oppose the plan.

This plan is concurred in by the Texas Senators, the local Congressman, the Governor and others.

Because of the long, unavoidable delays (1968-82) which have occurred in completing this Project, we strongly urge that Congress take special recognition of this fact and appropriate \$6,000,000, which is the Corps' capability for continuing the work on this Project during FY83.

2. OPERATION AND MAINTENANCE OF THE SHIP CHANNEL

Restoring the entire reach of the Corpus Christi Inner Harbor between Mile 21.90 and Mile 31.60 to Project depth was completed in May, 1981, after eight (8) years of delay caused by objections from environmentalists. Completion of these two maintenance contracts by the Corps permitted the lifting of the restrictions on vessel drafts entering the Port. All channels and basins were restored to the 40-foot project depth. However, other reaches of the waterway will require maintenance dredging during FY83. Besides dredging on the bar channel, the planned maintenance program includes dredging the La Quinta Channel and the Inner Harbor from Beacon 82 to the west end of the Corpus Christi Turning Basin. Because of possible polluted material in the Inner Harbor, it is planned to undertake maintenance dredging ahead of deepening the channel to its authorized 45-foot depth. All material recovered from the maintenance dredging will be deposited in confined containment areas separate from the undisturbed new work dredging.

We support the President's budget recommendation of \$7,185,000 for operation and maintenance, which also is the Corps' capability for maintaining the Corpus Christi Ship Channel Project in FY83.

3. REVIEW REPORT ON REQUESTED MODIFICATIONS TO THE CORPUS CHRISTI SHIP CHANNEL PROJECT

Developing information for preparing a review report on the requested modifications to the Corpus Christi Ship Channel Project pursuant to the House Public Works Committee resolution adopted September 19, 1972, continues. Preparation of a draft report is expected in the near future as personnel become available. Additional study funds are not being requested by the Corps.

JUSTIFICATION FOR CONGRESS APPROPRIATING THE REQUESTED FUNDS

The **PORT OF CORPUS CHRISTI** is the 7th largest port in the Nation (1979) in terms of waterborne commerce. Waterborne commerce in 1981 totalled 50,310,474 tons, a decrease of 6.0 percent from the previous year. General economic conditions, particularly imports of crude oil and the loss of grain exports as the result of a dust explosion at the Corpus Christi Public Elevator accounts for the decline in waterborne commerce. Table No. III, which follows, shows annual waterborne commerce and traffic accommodated by the Port of Corpus Christi during the past ten (10) years.

A study recently prepared by the American Association of Port Authorities for 1979 credits the Port of Corpus Christi with 55,597,104⁽¹⁾ short tons of commerce. During 1979 exports totalled 4,613,500⁽¹⁾ tons with a value of \$742,000,000⁽²⁾ with imports of 20,930,500⁽¹⁾ tons and a value of \$3,808,000,000⁽²⁾. For the year, imports and exports total 25,544,000 short tons with a value of \$4,550,000,000⁽²⁾ which represented 46 percent of the **Port of Corpus Christi's** total commerce.

(1) U.S. Army Corps of Engineers, Waterborne Commerce Statistics Center, New Orleans, Louisiana

(2) U.S. Department of Commerce, Bureau of the Census, U.S. Waterborne Exports and General Imports, Annual 1980 (Washington, DC: Government Printing Office, August 1981)

TABLE NO. III
ANNUAL WATERBORNE COMMERCE AND TRAFFIC ON
THE CORPUS CHRISTI SHIP CHANNEL

Year	Total Waterborne Commerce & Traffic			Corpus Christi Waterborne Commerce & Traffic		
	Commerce (S. Tons)		Total (2) Vessel Traffic (one-way only)	Commerce (S. Tons)		Corpus Christi Traffic (2) (one-way only)
	U.S. Corps of Engineers (3)	Port of Corpus Christi (1) (2)		U.S. Corps of Engineers	Port of Corpus Christi (1) (2)	
1972	25,496,084	26,167,081	5772	22,300,918	22,678,577	5100
1973	(a) 27,171,559	30,031,968	5696	(a) 24,794,711	27,015,499	5227
1974	(a) 35,645,004	40,896,346	8014	(a) 30,708,518	35,451,188	6443
1975	(a) 41,290,771	44,606,135	7606	(a) 35,487,454	37,945,544	5500
1976	43,492,959	48,293,793	7033	38,558,753	43,432,049	4782
1977	56,041,113	60,669,825	(b) 5446	46,732,810	53,705,517	(b) 4761
1978	54,678,296	61,246,725	(b) 6500	46,554,601	54,611,337	(b) 5529
1979	55,597,104	60,846,745	(b) 6991	46,422,792	54,121,877	(b) 6168
1980	*	53,506,420	(b) 7408	*	48,802,788	(b) 6822
1981	*	50,310,474	(b) 6786	*	47,545,612	(b) 6395

*Not Available

- (1) Statistics of the Port of Corpus Christi Authority (formerly Nueces County Navigation District No. 1 - NCND). Port Authority records are maintained slightly differently from those of the Corps of Engineers.
- (2) Corpus Christi commerce and traffic includes the Corpus Christi Inner Harbor, Port Ingleside and La Quinta Channel. Harbor Island commerce and traffic are not shown separately, but are included in the total waterborne commerce.
- (3) Certain military cargoes and bunkers are excluded from the Corps' statistics. However, the Port includes all cargo and bunkers moving across the docks as ships cargo, but bunkers loaded onboard a ship from barges are counted as barge cargo. The Port of Corpus Christi statistics are based upon actual records of shippers and receivers of cargo.
- (a) From 1973 to 1975 the Bureau of the Census failed to report most of the imported bauxite ore.
- (b) For 1977, 1978, 1979, 1980 and 1981 each barge is counted separately, but the tug handling the tow is not counted.

CONCLUSION:

The volume of waterborne commerce and traffic shown in Table No. III on the previous page fully justifies the requested appropriations as well as all past expenditures which Congress has made to construct and maintain this Project. Justification for the requested funds is further substantiated by the \$4.55 billion of export and import commerce which the Port handled in 1979. However, the future growth of the Port of Corpus Christi is dependent upon the continued Congressional funding for maintaining and improving the ship channel to accommodate larger ships and increased traffic.

During the past 20 years (FY61 to FY81) nonfederal port-related expenditures along the Corpus Christi Ship Channel have totalled \$102,346,937, compared with federal expenditures of \$77,345,013. The significant point being that nonfederal expenditures for waterfront development have exceeded federal expenditures by over 35 percent.

Because of the importance of the **PORT OF CORPUS CHRISTI** to the Nation's international trade and commerce and the fact that nonfederal expenditures have significantly exceeded federal expenditures, we cannot concur with any cost recovery legislation which requires large contributions from this Port or the collection of user charges from the Port's customers.

Appropriating less than ten (10%) percent of the custom duties for new work and maintenance dredging of U.S. deep draft ports would assure this Nation of having adequate ports and waterways to meet the future needs of world commerce. In our view, using part of the custom duties is the logical source of funds for maintaining these ports.

STATEMENT OF DALE MILLER, PRESIDENT, GULF INTRACOASTAL CANAL ASSOCIATION

My name is Dale Miller, and I am President of the Gulf Intracoastal Canal Association, with principal offices in Houston. It is my privilege to appear before you again today, as I have each year for a considerable period of time, to recommend the appropriation of adequate funds to continue the improvement and efficient operation of the Gulf Intracoastal Waterway system, and related shallow-draft and deep-draft projects along the Gulf Coast and into the hinterlands. A number of these projects are being represented by well-informed witnesses during the course of your hearings, and I shall not encumber the record with repetitious testimony. It will be my function to depict briefly a broader picture of this impressive navigation development along the Gulf Coast.

Our Gulf Intracoastal Canal Association was organized in 1905, nearly 77 years ago, and through the years it has cooperated actively with Congress and Government agencies in the creation of the Gulf Intracoastal Waterway system, a complex of navigation facilities which has come to be regarded as the most remarkable artery of transportation in America. It has achieved by far the highest ratio of benefits to costs of any waterway in the nation -- or of any other form of transportation. Its annual commerce of approximately 100,000,000 tons exceeds by twenty times the figure of 5,000,000 tons which was originally predicted for it when it was authorized. It is a noteworthy fact that this Canal returns each year more than \$26 in savings in transportation costs for every dollar expended by the Federal Government in its construction, maintenance, and operation.

I am aware that these facts are known to many members of this Subcommittee, who have been close to this subject for years; but I review them briefly here to place in proper perspective my appearance before you in behalf of adequate appropriations to perpetuate the worthwhile service being performed by the Intracoastal Canal and related navigation projects. I have no hesitancy in asserting that their record of service in the past fully justifies your favorable consideration of their needs today.

In submitting for your consideration these meritorious projects along the Gulf Coast, we conform our recommendations to criteria which we think are sound, these criteria having been established by findings of responsible officers of the Corps of Engineers as to the amount of funds which can be economically expended during the year. While recommendations of the Office of Management and Budget reflect such criteria in some instances, they fail to do so in many cases, and we respectfully suggest that the more reliable guide to a realistic civil works program is provided by the ability of the Corps to prosecute its work on a sound basis.

With respect to the Gulf Intracoastal Waterway itself, our most important objective in the future will be the deepening and widening of the main channel to accommodate its rapidly growing commerce. Congress has already authorized new dimensions for the busy central segment between New Orleans and Houston, with increases from 12 to 16 feet in depth and from 125 to 150 and 200 feet in width. We are confident that the Subcommittee shares our awareness of the importance of this authorized project, but we do not request funds to initiate construction at the present time, since local problems have not yet been resolved. Inasmuch as the project spans a distance of 350 miles, problems of rights-of-way and pipeline relocations are of course formidable, but we intend to have them resolved, and our request just now is only that the Subcommittee keep in mind the importance of this undertaking until such time that we seek funds to get construction underway.

Meanwhile, however, it is a notable fact that during the period since those new dimensions were authorized in 1966 the commerce moving over the Waterway has more than doubled. In other words, if Congress found it necessary to authorize a considerable deepening and widening when the traffic was less than half of what it is today, what might be said of its actual requirements now? For this reason, we secured authority from Congress to empower the Corps of Engineers to up-date those studies which led to that authorization -- to determine if present conditions do not in fact require still greater dimensions. We recommend that the Subcommittee provide

whatever funds may be required by the Corps of Engineers to bring this important investigation to an expeditious conclusion.

Virtually all navigation projects on the Gulf Coast -- both deep-draft and shallow-draft channels -- either coincide with, or are tributary to, the Gulf Intracoastal Waterway, and for this reason our Association has a vital interest in their development and improvement. Accordingly, we earnestly request the Subcommittee to give favorable consideration to the needs of all such projects.

One of the most important objectives of the Gulf Intracoastal Canal Association is the extension of navigation into the hinterlands through the development of principal tributaries. Of major importance in the eastern Gulf is the Tennessee-Tombigbee, the construction of which should be expedited. Of comparable importance in the western Gulf is the Trinity River in Texas. Despite a number of problems that have been encountered in some areas of the watershed, we believe the project remains viable for navigation to a considerable distance inland.

As important as tributary streams into the hinterlands, however, are access channels outward to the Gulf, especially in view of the increasing activity in offshore petroleum development. Improvement of existing facilities, and construction of new channels as required, will be essential to this development -- as will be increased dimensions for progressive Gulf Coast ports. The Gulf Intracoastal Waterway will be a vital part of all this activity, and our Association urges the Appropriations Subcommittee to be promptly responsive to such needs.

Of significance to our long-range program are two projects in Florida. One is the Cross-Florida Barge Canal, a project designed to connect the Gulf and Atlantic inland waterways into a continuous navigation facility extending from the Mexican border to the northeastern area of the United States. We deplore the arbitrary action of the Administration in 1971 in halting construction of this project -- on which more than fifty million dollars had been expended to bring it to one-third completion -- but it remains our conviction that it is needed, and we are hopeful of its eventual re-consideration. The other project is the extension of the Gulf Intracoastal Waterway from St. Marks to Tampa Bay -- the missing link in a protected inland navigation channel which otherwise extends along the entire Gulf. This key project should be constructed in order to complete the system.

Funds for general investigations, and advance engineering and design, are as important as funds for construction, for without adequate appropriations in those categories a realistic and beneficial public works program cannot be perpetuated. Sufficient funds for rehabilitation work should likewise be supplied when required, in order that the system may operate at its maximum efficiency. We were heartened by the initiation of construction last September of the new Leland Bowman Lock in Louisiana, as a replacement for the obsolescent Vermilion Lock, and completion of this much-needed facility should be expedited.

Although requests for construction funds are customarily accorded the greatest emphasis in these hearings, I would like to stress also the over-riding importance of appropriations for maintenance. Insufficient funds for maintenance have many times reduced the service rendered by existing rivers and harbors projects, with a resultant loss in the benefits which became available upon their completion.

Even though continued Federal funding of this vital Waterway is of primary importance, perhaps the most important issues confronting us now are those currently under consideration by Congress. We are disturbed by pending legislation which would provide for an escalation of user charges on our inland waterways, and the assessment of "cost-sharing" or "cost-recovery" obligations on "local sponsors" of projects which actually are not local in character but regional and even national in significance. All such proposals would require passing added costs along to the consumers, aggravating inflationary pressures which beset our economy. Such added costs would seriously imperil the role of navigation in the competitive market place of transportation. Such issues are of major concern to all of

us who are involved in the effort to develop and preserve a balanced transportation system to serve the American people with a maximum degree of efficiency.

We realize that during this period of severe Budget constraints the problems confronting Congress are indeed formidable, and that a critical scrutiny must be applied to every budgetary item. But we respectfully recommend that a long-range view be taken -- a view of the potentially serious consequences which would be suffered with the imposition of additional burdens on the users and "local sponsors" of our national waterways system. Congress has historically supported waterways which are accessible to all as a matter of vital national interest, and this far-sighted view has enabled our Nation's waterways to become the best in the world.

The assessment of additional charges on the users, and on those who participate in the development of our waterways, could have a devastating effect on struggling marginal operators and on many smaller ports which depend on the waterways for economic survival. We earnestly urge the Congress to give thorough and deliberate attention to the gravity of this problem.

I appreciate the opportunity to appear before you today in support of our Association's program, which, succinctly stated, is to promote the economic growth and development of the Gulf Coast through low-cost water transportation.

TRINITY RIVER BASIN PROJECTS

STATEMENT OF AMON G. CARTER, JR., CHAIRMAN, TRINITY IMPROVEMENT ASSOCIATION

Mr. CROW. The next witness is Mr. Carter, chairman of the Trinity Improvement Association.

Mr. CARTER. Thank you, Mr. Chairman. We are going to cut our presentation short.

I am Amon Carter of Fort Worth. I am chairman of the board of Trinity Improvement Association. This is a nonprofit organization of citizens throughout the basin who are dedicated to the prudent development and use of water and soil resources of the Trinity River basin. We had six people who wanted to testify. We are going to turn all of those statements into the record, but we have got over 50 people who came up here today.

We lost a few of them, but those of you who are here from the Trinity Improvement Association and the Trinity River Authority, I want you to stand up. [Group standing.]

These are 50 concerned citizens. They all paid their own way and we are going to put all of the statements in the record there. We appreciate appearing here.

We want your support in the appropriations for this fiscal year. We just hope you give us your support.

Thank you.

Mr. CROW. Thank you very much, Mr. Carter. You and your group have been most helpful in providing support and interest in the water resource development program. I regret that the situation on the floor has been so disruptive to the presentation of your group.

Be assured that all of your material will be included in the record and reviewed carefully.

Thank you.

[The statements follow:]

STATEMENT OF AMON G. CARTER, JR., CHAIRMAN OF THE BOARD, TRINITY
IMPROVEMENT ASSOCIATION

MY NAME IS AMON G. CARTER, JR., OF FORT WORTH, TEXAS; AND I AM CHAIRMAN OF THE BOARD OF THE TRINITY IMPROVEMENT ASSOCIATION. THIS IS A NON-PROFIT ORGANIZATION OF CITIZENS FROM THROUGHOUT THE BASIN WHO ARE DEDICATED TO THE PRUDENT DEVELOPMENT AND USE OF THE WATER AND SOIL RESOURCES OF THE TRINITY RIVER BASIN OF TEXAS. BY OCCUPATION, I AM THE PUBLISHER OF THE FORT WORTH STAR TELEGRAM.

IT IS MY PRIVILEGE TODAY TO ACT AS SPOKESMAN FOR THE DELEGATION OF 50 PEOPLE WHO HAVE FINANCED THEIR OWN EXPENSES TO TRAVEL HERE TO APPEAR BEFORE YOU IN SUPPORT OF VITAL WATER RESOURCE PROJECTS IN OUR AREA AND TO COORDINATE THE BRIEF ORAL TESTIMONY OF THIS DIVERSE, BUT UNITED, GROUP.

THE STRONG ECONOMY AND QUALITY OF LIFE IN THE TRINITY BASIN DERIVES SIGNIFICANTLY FROM THE DEVELOPMENT OF SURFACE WATER SUPPLIES, FLOOD CONTROL AND RECREATION OPPORTUNITIES. THE FEDERAL INVESTMENTS IN THESE WATER PROJECTS HAVE PROVEN TO HAVE BEEN AMONG THE MOST COST EFFECTIVE EXPENDITURES OF PUBLIC FUNDS, AND I COMMEND THIS BODY FOR ITS SUPPORT OVER MANY YEARS.

RECENTLY, THE EXPLOSION IN POPULATION AND INDUSTRIAL DEVELOPMENT WHICH IS OCCURRING IN OUR PART OF TEXAS HAS PLACED VERY HEAVY DEMANDS ON EXISTING WATER SUPPLIES. AS LIGNITE MINING OPENS UP IN THE MID-TRINITY BASIN, THERE WILL BE YET MORE DEMANDS FOR WATER TO HELP SATISFY THE NATION'S ENERGY NEEDS. THE HEAVY FINANCIAL BURDEN OF PROVIDING WATER NEEDS GROWS MORE ACUTE EACH YEAR. WE AGAIN REQUEST THIS COMMITTEE'S SUPPORT FOR THE PROJECTS TO BE MENTIONED IN THE STATEMENTS THAT WILL FOLLOW MY COMMENTS.

WE ARE EXTREMELY GRATEFUL FOR THE TIME WHICH THIS COMMITTEE HAS GRACIOUSLY ALLOTTED US FOR THIS PRESENTATION. PLEASE ACCEPT OUR APPRECIATION FOR THE JOB YOU HAVE DONE, IN THESE DIFFICULT TIMES, IN MAINTAINING SOUND WATER DEVELOPMENT PROGRAMS THAT HAVE PROVED THEIR ECONOMIC AND ENVIRONMENTAL SOUNDNESS.

MR. CHAIRMAN, I WISH TO SUBMIT FOR THE RECORD A COMPLETE LIST OF THE DELEGATION APPEARING HERE TODAY AND COPIES OF THE TESTIMONY TO BE GIVEN BY OUR GROUP.

AGAIN, THANK YOU FOR ALLOWING US TO APPEAR BEFORE THIS COMMITTEE; AND WE URGE YOUR FAVORABLE CONSIDERATION OF OUR REQUESTS.

SUMMARY OF REQUESTS

THE TRINITY IMPROVEMENT ASSOCIATION (TIA) REQUESTS SUPPORT OF THE CONGRESS WITH REGARD TO THE ENERGY AND WATER DEVELOPMENT APPROPRIATIONS BILL FOR FISCAL YEAR 1983 FOR PROJECTS OF THE CORPS OF ENGINEERS IN TEXAS.

FUNDING REQUESTS

<u>PROJECT</u>	<u>BUDGET REQUEST</u>
<u>ADVANCED ENGINEERING AND DESIGN</u>	
TRINITY RIVER, TEXAS	
(DALLAS FLOODWAY EXTENSION	
AND NAVIGATION TO LIBERTY)	\$ 308,000
<u>CONSTRUCTION</u>	
COOPER LAKE AND CHANNELS	\$ 1,500,000
LAKEVIEW LAKE	\$ 27,800,000
RAY ROBERTS LAKE	\$ 37,000,000
<u>OPERATIONS AND MAINTENANCE</u>	
BARDWELL LAKE	\$ 647,000
BENBROOK LAKE	\$ 801,000
GRAPEVINE LAKE	\$ 1,189,000
LAVON LAKE	\$ 1,357,000
LEWISVILLE DAM	\$ 1,943,000
NAVARRO MILLS LAKE	\$ 602,000
WALLISVILLE PROJECT	\$ 65,000
TRINITY RIVER & TRIBUTARIES	\$ 1,020,000*

*NOTE: THIS ITEM WAS NOT INCLUDED IN THE FY 1983 BUDGET REQUEST.

ADMINISTRATIVE REQUEST:

TIA REQUESTS THAT THE COMMITTEE URGE THE CORPS OF ENGINEERS TO COMPLETE ACTION ON A REVISED ENVIRONMENTAL IMPACT STATEMENT AND POST-AUTHORIZATION CHANGE REPORT ON WALLISVILLE RESERVOIR AND SUBMIT FINALIZED REPORTS TO THE FEDERAL DISTRICT COURT IN HOUSTON SO THAT THE INJUNCTION AGAINST CONSTRUCTION CAN BE LIFTED AND A BUDGET REQUEST FOR FUNDING CAN BE SUBMITTED TO CONGRESS FOR APPROVAL. TIA ALSO REQUESTS THAT THE COMMITTEE DIRECT THE CORPS OF ENGINEERS TO COMPLETE ACTION ON THE HABITAT MITIGATION REPORT FOR THE TRINITY RIVER PROJECT.

TRINITY IMPROVEMENT ASSOCIATION

Delegation To

1982 Congressional Hearings

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STATEMENT OF CARL W. RIEHN, EXECUTIVE DIRECTOR AND GENERAL MANAGER, NORTH TEXAS
MUNICIPAL WATER DISTRICT

I am Carl W. Riehn, Executive Director and General Manager of the North Texas Municipal Water District. Today I am speaking for the coalition of local water suppliers that have contracted for the water supply in the Cooper Lake and Channels Project. This includes the Sulphur River Municipal Water District, City of Irving, and the North Texas Municipal Water District.

Philosophically, man came of his cave and discovered fire and since that time has continued through technological advancement to improve his comfort and standard of living. A mainstay of this advancement has been utilization of water resources to sustain life, cleanse the environment, and to serve man in various multi-purpose capacities. But as we are aware, the Cooper Lake and Channels Project was caught in a time of fear which occurred in the late 1960's and 1970's based on alleged damage to the environment and over-utilization of natural resources including water. This resulted in Federal legislation that allowed small special interest groups to harass, slow down, or stop projects through the selected use of the Federal Courts.

Congress authorized this project in 1955 and after years of preparation the Cooper Lake Project contracts were executed in 1968 and construction started. In 1971 the "Texas Committee on Natural Resources" filed suit and an injunction was placed against the project for lack of an Environmental Impact Statement. In 1981 all Environmental documents were again submitted to Federal Judge William Wayne Justice in the United States District Court for the Eastern Division of Texas awaiting a time to be heard. The local entities have been assured that the project should be released and the construction continued when the Federal Judge has time for his review.

The cost of the project has increased from \$26,529,000 in 1968 to in excess of \$127,000,000 currently. The local interest cost has increased by over 400 percent.

The Sulphur River Municipal Water District represents the three small communities - Cooper, Commerce and Sulphur Springs, that are adjacent to the Sulphur River and geographically close to the project. All three cities proposed to utilize this water for their immediate growth and planned for this project to meet their long range future needs. The delay has been a disappointment causing water shortage and reduced economic activities. The City of Irving and the North Texas Municipal Water District provide service to a portion of the Dallas Metropolitan Area containing approximately 690,000 citizens. The Cooper Lake Project has been an integral part of the water supply planning for their future needs since the mid-1960's. The lack of completion of the project has required additional and more expensive programs to meet the current needs; however, substantial water studies have been completed that reflect the Cooper Lake Project is still the most cost effective program available for future supplies. The NTMWD has verified this position through four major reports prepared by different outside consultants in search for additional water supply in all of the major river basins adjacent to the Upper Trinity area.

The U. S. Army Corps of Engineers reports that if Judge Justice releases the project in accordance with the anticipated time schedule the Corps has the capability and a need for 1.5 million dollars to proceed with the final plans and specifications on the dam. It is requested that these funds be made available so that the project would not be further delayed. The citizens in the service area have already suffered considerable economic loss due to the ability of special interests groups, that do not feel any economic consequences, to effectively stall and prohibit the construction of such a vitally needed project; therefore, any further delay due to a shortage of appropriations on the project, would bring further water supply problems and economic losses to these same citizens. Your inclusion of these funds in the program will be greatly appreciated.

STATEMENT OF DON HICKS, MAYOR PRO TEM, DALLAS, TEX.

On behalf of Mayor Jack Evans and the Dallas City Council, I appreciate this opportunity to discuss with you a very important project to our city, our state, and our nation - Ray Roberts Reservoir.

In 1980 the Cities of Dallas and Denton executed contracts with the Corps of Engineers to sponsor the Ray Roberts Project. Thanks to the expeditious work by the Corps and to the timely and prudent allocation of funds by the U.S. Congress, the purchase of project lands is well underway, the design of the dam and outlet works is complete; the construction contract is being advertised now and bids will be opened April 20. Award of the construction contract for this dam is anticipated in early May of this year. This is good news to the rapidly growing, water short North Texas region that is depending on this project to help meet its water supply needs.

President Reagan's budget for 1983 includes \$37 million for the Ray Roberts Reservoir Project which is to fund continuation of land acquisition and construction. With adequate funding, the Corps is projecting a 1986 completion for this project. We believe full funding of this project is needed not only to keep this project on schedule but also for the following reasons:

- * The water supply is urgently needed
- * Inflation and Construction Costs are continuing to increase
- * Any project delays will cost taxpayers money
- * Much needed jobs will be created
- * Will provide for close-in recreational needs for growing metroplex
- * Federal Government will receive repayment sooner with expeditious project completion

The water supplied by the Ray Roberts Lake will be a gravity supply source since it is uphill of Dallas and Denton, thereby saving the nation energy. It will supply over 20 communities throughout the metroplex with much needed water and additional flood protection.

The Ray Roberts Reservoir Project is a wise investment. With water being such a needed and life sustaining commodity, we believe this project warrants maximum funding. In fact, if the Corps has a capability greater than the \$37 million included in the proposed budget, we urge funding equal to the capability.

Also included in the FY 83 budget is \$308,000 for the Trinity Floodway Project. The Dallas Floodway Extension is a part of this project and the funds included in FY 83 will continue the engineering design for this extension. Dallas, also, supports continued funding for this project.

STATEMENT OF STATE REPRESENTATIVE RAY KELLER OF TEXAS

My name is Ray Keller and I serve as a Texas State Representative for a portion of Southwest Dallas County which includes a portion of the area now under discussion, Lakeview Lake.

I wish to emphasize the absolute urgency of completing Lakeview Lake on schedule which will be possible only with the recommended appropriation of \$27.8 million. Not only will this lake meet water supply needs and provide flood control, it will also create many recreational benefits. In the first year of operation alone, 4.5 million people are expected to come to the lake for recreational purposes.

The state has taken a strong interest in the development of the whole project, but specifically in the area of recreation. Even at this stage a representative of the Texas Parks and Wildlife Department is at the Lakeview construction site.

At this time, the state is heavily involved in developing a master plan for a 2,000 acre state park, a major step toward providing urban recreational facilities. So far, plans for the park include developing both day-use and overnight camping facilities as well as boat launching ramps.

The state is also participating in planning and developing roads to provide access to and from the lake. There has already been one major relocation of a portion of FM 1382, which is a magnificent road by anyone's standards.

I hope that by showing the importance of this project to the State of Texas, not to mention the millions of people who will ultimately benefit, this Committee will show their support by approving the recommended appropriation for FY 1983 construction.

STATEMENT OF SCOTT PARKER, MAYOR, LIBERTY, TEX.

I am Scott Parker and as Mayor of Liberty, Texas, I speak today on behalf of The City of Liberty, The Liberty Port Commission, The Liberty-Dayton Area Chamber of Commerce, The Liberty County Industrial Commission, Liberty County Commissioners' Court, and The Chambers-Liberty County Navigation District in full support of the fundings requested for the Trinity River projects.

The Trinity River has played a crucial role in the history of our region. It provides us with opportunities in the form of water born commerce and water supplies, and challenges in the form of floods and sandbars.

Maintenance dredging along the 45 miles of authorized six-foot run of the river channel to the Port of Liberty is essential to our community. Operations and maintenance funds to clear the snags and sandbars that hinder navigation were not included in the Administration's FY 1983 Budget Message. We need that channel. It will take the addition by this Committee of \$ 1,020,000 in O & M funds under the caption of ("Trinity River and Tributaries" to keep it clear in FY 1983. Our lifeline linking us with the Gulf Inter-Coastal Waterway is about to be cut by a nationwide reduction in O & M funds and we respectfully request your assistance and intervention.

As a spokesman for the Lower Trinity River I further request your support for the recommended appropriation of \$308,000 for Advanced Engineering and Design on the Trinity River Project. Our specific interests are studies on that component of the Trinity River Project involving the development of a Multiple-purpose Channel to the Port of Liberty. We have been advised that the recommended appropriation will be adequate for study purposes in FY 1983 and again request your support.

As to the Wallisville Reservoir and Saltwater Barrier some progress can be reported in the form of draft Environmental Impact Statements and Post Authorization Change Reports being circulated for review within the Corps of Engineers. We in the Lower Trinity can think of very few things Congress can do at this point to expedite the resumption and completion of construction on this project. We do want you to know that we still need the Wallisville Project and will ultimately return to this body for construction funding.

Thank you for this opportunity to speak for Lower Trinity River interests and we solicit your support for our projects. I will be happy to try and answer any questions you might have.

STATEMENT OF ROY ORR, DALLAS COUNTY (TEX.) COMMISSIONER

My name is Roy Orr and as a Dallas County Commissioner and former President of the National Association of Counties, I have learned first hand how important Lakeview Lake is to my constituents, and how fortunate we are in comparison to other people throughout this country. The completion of Lakeview will solve many of our problems related to water supply, flood control and public recreation. Its regional significance will be immense, and by my judgement, entirely positive.

Even now, a surface water supply is greatly needed by the four cities who will ultimately benefit from Lakeview Lake. I should point out, that the Trinity River Authority, in addition to being Lakeview's

local sponsor, is in the process of completing an engineering feasibility study on a Lakeview Regional Water Supply System. This type of pre-planning will allow for construction of the water system's intake structure in the dry at a considerable savings to the involved parties, and ultimately, for the timely delivery of treated water.

Not to be overlooked is the additional benefit of flood control. In dry weather Mountain Creek, the Trinity River tributary on which Lakeview is located, is a deceptively peaceful looking stream. In times of flood that stream becomes a raging torrent that has routinely devastated and disrupted the lives of people in southwest Dallas County for more years than I can remember. We need relief and Lakeview will provide it.

Area residents now see the completion of Lakeview Lake as inevitable, and planning has gone beyond the lake itself. An ad hoc citizens committee has formed dedicated to the development of a comprehensive master plan for the development of roads in the lake area. These roads will be absolutely necessary in order to accomodate the millions of lake visitors expected every year.

I hope, based on what has been said today, this Committee understands why continuing construction of Lakeview Lake is important. Appropriation of the recommended \$27.8 million for FY 1983 will allow Lakeview's construction to continue on schedule and therefore be completed at the earliest possible time and lowest possible cost.

Thank you for your attention and I would be happy to answer any questions.

STATEMENT OF ROBERT D. HARDY, MEMBER, BOARD OF DIRECTORS, TRINITY
RIVER AUTHORITY

I am Robert D. Hardy of Huntsville, Texas. I am a member of the Board of Directors of the Trinity River Authority of Texas (TRA) from Walker County and currently serve as the Authority's President.

Funding Requests

TRA strongly endorses and requests your support for the levels of funding recommended in the President's FY 1983 Budget for those projects we support as local sponsor within our political subdivision.

- A. As to the Trinity River Project, \$308,000 has been recommended for Advanced Engineering and Design. The Corps of Engineers has advised TRA that this amount of money would be adequate to complete studies on the Dallas Floodway Extension component of the Trinity River Project during FY 1983. Additional funding to complete similar studies on the only other viable component of the Trinity River Project, the Multiple-Purpose Channel to the existing Port of Liberty near the mouth of the Trinity River, will be necessary in future years.

- B. As to Lakeview Lake, \$27.8 million has been recommended for continuing construction of this federal flood control, water supply and recreation project. Construction and land acquisition on this project has proceeded in a most satisfactory manner in recent years and the current construction schedule calls for the intentional impoundment of water in September 1985 and total completion in September 1988. The timely completion of this project remains a high priority of TRA's because of the increasing needs for the water supply, flood control and recreation benefits that will thus be made available as well as for reasons of long range economy.

- C. TRA again offers its support for Lake Ray Roberts, formerly known as Lake Aubrey. This project is a water supply, flood control and recreation project located in Cook and Denton Counties north of Dallas. Lake Ray Roberts is within the Trinity River Basin, but outside of TRA's political subdivision. The Cities of Denton and Dallas serve as the local sponsors for Lake Ray Roberts. A total of \$37.0 million was recommended for this lake and we encourage this Committee's support for this appropriation.

- D. Operations and maintenance funds that would allow for dredging at the authorized six-foot channel to the Port of Liberty were not included in the recommended FY 1983 Budget. Without these funds navigation on the lower Trinity River will become virtually impossible. We request that this Committee restore those deleted Operations and Maintenance funds in the amount of \$1,020,000 under the caption of "Trinity River and Tributaries, Texas."

Administrative Requests

Another high priority of the Authority's is the resumption and completion of the Wallisville Reservoir and Saltwater Barrier at the mouth of the Trinity River. As you are aware the Wallisville Project has languished under the constraints of an environmental injunction since 1973. After all these years we can cautiously report some limited progress. The Galveston District of the Corps has finally completed a draft of a revised Environmental Impact Statement (EIS) and Post Authorization Change Report (PACR) and begun the internal review process. While funding is not yet necessary we do request that Congress include language directing the Corps to complete their review at the earliest possible time. We further request that Congress direct the Corps to expeditiously submit their finalized Wallisville reports to the Federal District Court in Houston, so the injunction can be lifted, and in turn presented to Congress, for approval and construction funding.

The stakes at Wallisville are incredibly high and increasing by the year. Without this project the raw water intake structures in the Lower Trinity River of four separate rice irrigation systems as well as the Coastal Industrial Water Authority, which supplies water to the Houston/Galveston industrial complex, remain vulnerable to saltwater intrusion and shutdown. We are obliged to pursue this project and request your continuing support.

Conclusion

To ask for federal funds at this point, and in this economy, is difficult. We do so for three reasons. The first is that the federal water projects we sponsor that are under construction can only be completed with continued funding. The second is that at the same time our state's population is exploding beyond all projections--no adequate mechanism for state water development exists. Several attempts have been made in the past to develop such a mechanism, and another concerted effort is being made at the present time. For now, however, and for all practical purposes federal funding is a major avenue we feel compelled to pursue. The third reason is that by our experience the federal investment in Trinity River water development has proven to pay the highest returns of any federal program of which we are aware.

We appreciate your attention to our budget requests and solicit your support.

Thank you.

STATEMENT OF RICHARD O. STEWART, MAYOR, DENTON, TEX.

MY NAME IS RICHARD O. STEWART AND I AM THE MAYOR OF THE CITY OF DENTON, TEXAS. ON BEHALF OF THE DENTON CITY COUNCIL AND ALL THE CITIZENS OF THE CITY OF DENTON, I EXTEND MY APPRECIATION FOR THIS OPPORTUNITY TO APPEAR BEFORE YOU REGARDING THE RAY ROBERTS RESERVOIR THAT IS BEING CONSTRUCTED BY THE CORPS OF ENGINEERS NEAR DENTON.

THE CITY OF DENTON JOINS THE CITY OF DALLAS IN EXPRESSING APPRECIATION FOR THE PROGRESS THAT HAS BEEN MADE ON THIS MOST IMPORTANT WATER RESOURCE PROJECT. THIS PROGRESS HAS BEEN POSSIBLE DUE TO THE CONTINUED SUPPORT OF THIS COMMITTEE AND THE DILIGENT EFFORTS OF THE CORPS OF ENGINEERS, FOR WHICH WE ARE SINCERELY GRATEFUL.

THE CITY OF DENTON IS A TWENTY-SIX PERCENT PARTICIPANT IN THIS RESERVOIR AND IS VITALLY IN NEED OF THIS NEW WATER RESOURCE. DENTON'S PRESENT WATER REQUIREMENTS ARE IN EXCESS OF NINE MILLION GALLONS PER DAY, WHEREAS THE CITY'S WATER RIGHTS FROM OTHER SOURCES ARE ONLY FOUR AND ONE HALF MILLION GALLONS PER DAY. ALTHOUGH WATER IS AVAILABLE TO DENTON ON AN INTERIM BASIS FROM THE CITY OF DALLAS, IT IS MOST IMPORTANT TO DENTON AND OTHER CITIES IN THE NORTH TEXAS AREA THAT THE RAY ROBERTS RESERVOIR BE COMPLETED IN AS TIMELY A MANNER AS POSSIBLE.

IT IS MY UNDERSTANDING THAT THE PRESIDENT'S PROPOSED BUDGET INCLUDES FUNDING OF 37 MILLION DOLLARS FOR RAY ROBERTS LAKE. ALTHOUGH WE RECOGNIZE THE TREMENDOUS RESPONSIBILITY THAT CONGRESS AND YOUR COMMITTEE HAS IN REDUCING THE FEDERAL DEFICIT, WE BELIEVE THE URGENT NEED FOR WATER RESOURCES MUST BE GIVEN A HIGH PRIORITY EVEN IN TIMES OF AUSTERITY. THEREFORE, WE RESPECTFULLY ASK YOUR SUPPORT TO MAINTAIN THE REQUESTED FUNDING LEVEL FOR RAY ROBERTS RESERVOIR AND IF POSSIBLE TO THE FUNDING REQUESTED BY THE CORPS.

IN ADDITION TO THE SEVERAL REASONS OUTLINED BY THE CITY OF DALLAS FOR SUPPORTING A MAXIMUM FUNDING LEVEL, I WOULD LIKE TO ADD ONE ADDITIONAL ITEM. THE CITY OF DENTON, WITH THE COOPERATION OF DALLAS, IS PLANNING TO INSTALL A HYDROELECTRIC GENERATING UNIT ON

RAY ROBERTS RESERVOIR. ENGINEERING STUDIES SHOW THAT A 1000 KILOWATT HYDROELECTRIC GENERATOR IS FEASIBLE AT RAY ROBERTS AND THAT IT WILL PRODUCE ENERGY EQUAL TO 15,000 BARRELS OF OIL PER YEAR. THE UTILIZATION OF THIS RENEWABLE ENERGY SOURCE PLUS THE SUBSTANTIAL SAVINGS RESULTING FROM USE OF GRAVITY WEATER SUPPLY SOURCES AS COMPARED TO PUMPING WATER FROM LONG DISTANCES IS AN ADDITIONAL IMPORTANT REASON FOR COMPLETING RAY ROBERTS RESERVOIR IN A TIMELY MANNER.

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE, THANK YOU VERY MUCH FOR THIS OPPORTUNITY TO APPEAR BEFORE YOU AND CONVEY TO YOU THE VIEWS AND CONCERNS OF THE CITIZENS OF DENTON.

STATEMENT OF DAVID CLAYTON, PRESIDENT, LAKEVIEW LAKE PLANNING COUNCIL, TEXAS

The Lakeview Lake Planning Council is a citizen's group that has lobbied in support of this most needed federal water project since before it was first authorized by Congress in 1965. My name is David Clayton, and as President of the Council I have been asked to again stress our strong support and increasing need for this project. My remarks on Lakeview will be supported by testimony from Dallas County Commissioner Roy Orr and State Representative Ray Keller.

During the past year the Fort Worth District of the U. S. Army Corps of Engineers has made excellent progress on Lakeview construction. The construction of the first major contract for the project's outlet works and a small portion of the earthen embankment was completed. Land acquisition proceeded adequately, and was approximately 70 percent completed on January 1, 1982. Current forecasts call for the total project to be 50 percent complete by October 1982 with the intentional impoundment of water scheduled for 1985.

A major objective of our organization is to provide whatever support is necessary to have construction completed at the earliest possible time and lowest possible cost. For this reason we fully support the recommended appropriation of \$27.8 million for FY 1983 in order to maintain the established pace of construction.

The Council is also aware that current administration efforts to balance the budget have resulted in the deferral of a portion of the project's initial recreation development until 1988, and other recreational

facilities until 1997. While we understand the need for these deferrals, we hope that ultimately completing construction will not take as long as getting an initial start. For the record getting started took over 15 years.

Due to the length of time it has taken to bring the Lakeview Lake to its current state, the project has developed a rich history. One of the key characters in the early part of this history was the late Congressman for the Third Congressional District of Texas, the Honorable Joe Pool. Congressman Pool was not only a great visionary leader, but also the primary force in achieving the original Congressional Authorization for the Lake and in forming the Lakeview Lake Planning Council.

In honor of this great Texan, and only after considerable research and thought, the Planning Council has passed a resolution to change the name of Lakeview Lake to Lake Joe Pool. Our interest in officially changing the project's name is supported by Congressmen Martin Frost and Phil Gramm, in whose Congressional Districts; the Lakeview Project will be located. We further ask this Committee's support with the name change as a final, albeit late means of honoring a great Congressman.

In conclusion we thank the members of this Committee for their continuing support and attention. I would be happy to answer any questions.

STATEMENT OF ARTHUR I. DAVIDSON, DIRECTOR, BRAZOS RIVER AUTHORITY

Mr. CROW. Our next witness is Mr. Glynn Williams, president of the Brazos River Authority?

Mr. DAVIDSON. I am Arthur I. Davidson, director of the board of directors, and I would like to speak briefly for him. We have 10 other of our directors of the total board of 21 directors here today. Also with us today, we had several people from up and down the Brazos basin. They included the general manager who was also here, Carson Hoge, and his assistant, Michael Bukala. We had Roy Rhoades, the mayor of the city of Hillsboro here, Henry Moore, Kyle Cowan, and John Tuggle. All these people represented the Aquilla Water Supply District; and Paul Harvey of the Aquilla-Hackberry Creek Conservation District.

We had a councilwoman, Trudy Lee, from the city of Round Rock, and Bob Bennett from the city of Round Rock; Sam Huey, Round Rock; Mr. W. W. Cofield, director of environmental affairs, representing Transco Companies, Inc.; Gary Anderson representing the Bryan-College Station Chamber of Commerce; and representing the Texas Department of Water Resources, Seth Burnitt.

These people have submitted written statements, and you have included those in the record.

Briefly, I would like to point out that the \$600,000, in recognition of the need to hold the line on Federal expenditures, we are limiting our request to the subcommittee to the amounts proposed in the President's fiscal year 1983 budget for the Corps of Engineers water resource development projects in the Brazos River basin. The amounts and the projects are outlined in the written statement.

We would like to point out briefly that Lake Millican, one of the last major projects that the Corps of Engineers has on the boards now, is vitally essential to our ongoing water supply in the basin.

We have no more water that is available that is not already in long-term contract.

The Brazos natural salt pollution control project is moving right along, and if and when that is completed in the near future, that will free up a lot of fresh water for fresh water use that is now too salty in the middle portion of the Brazos basin. There is \$217,000 requested to carry this out.

South Fork Lake is the last of the reservoirs on the north San Gabriel River project. The population in that area has moved along in South Fork, and this should move along with it.

Mr. Chairman, we appreciate the opportunity to appear before the Subcommittee on Energy and Water Development and would be glad to answer any questions if they have not already been covered in the written statement.

Mr. CROW. Thank you very much for your testimony.

[The statement follows:]

STATEMENT OF GLYNN WILLIAMS, PRESIDENT, BRAZOS RIVER AUTHORITY

The Brazos River Authority is the agency of the State of Texas responsible for conserving and developing the water resources of the Brazos River Basin in Texas, an area of about 42,000 square miles.

The Authority considers expenditures for water resource development to be necessary investments for the future prosperity and welfare of the nation and its citizens. The Authority supports requests for appropriation of the following amounts for Fiscal Year 1983 for Corps of Engineers projects in the Brazos Basin:

<u>Project</u>	<u>Appropriation Requested</u>
Lake Millican	\$600,000 for continuation of advance engineering and design
Lake Aquilla	\$5,500,000 for continuation of construction
San Gabriel River Project (South Fork Lake)	\$550,000 for continuation of advance engineering and design
Brazos Natural Salt Pollution Control Project	\$217,000 for continuation of advance engineering and design
Brazos River and Tributaries Study	\$400,000 for continuation of study

The following information is submitted in support of the requested appropriations:

LAKE MILLICAN

Lake Millican is urgently needed at the earliest practicable date as a source of water supply to meet present as well as future water supply needs. It was projected that water supplies from Lake Millican would be needed by the beginning of this decade. This projection has proven to be accurate: water supplies from Lake Millican are needed now.

Essentially all of the long-term water supply yields of the lakes in the Authority's basin-wide water supply system are committed. Lake Millican is the only remaining undeveloped in-basin source of additional water supplies with the potential for producing the large amounts of water that will be required to meet present and future water supply requirements, not only in the immediate vicinity of Lake Millican and areas downstream, but also, through incorporation of Lake Millican into the Authority's basin-wide system, in other areas throughout the Brazos River Basin.

One of the most urgent needs for water from Lake Millican is to permit the development and use of extensive lignite deposits as sources of fuel to help meet the country's energy needs. The Brazos River Authority has already received requests for substantial amounts of water for this purpose which cannot be met from any source other than Lake Millican.

In addition to meeting present and future water needs in the vicinity of Lake Millican and in the lower Brazos Basin and adjacent coastal areas downstream, water supplies from Lake Millican are needed to help meet present and future water needs in other areas of the Brazos Basin by freeing up water which is now committed to meeting system needs in the basin-wide water supply system, so that such water may be used to satisfy growing needs in the vicinities of these other lakes.

Lake Millican is also needed for flood control. Until Millican goes into operation, areas of the lower Brazos Basin and adjoining coastal areas will continue to be subject to severe damage from uncontrolled floods from the 2200 square-mile Navasota River watershed.

It is critically important that the money needed by the Corps of Engineers for continued planning and design of Millican in FY 1983 be furnished so that this urgently-needed project can proceed to completion without unnecessary delay, and we respectfully urge the appropriation of the full \$600,000 requested in the President's budget.

LAKE AQUILLA

The President has requested \$5,500,000 for continued construction of Lake Aquilla during FY 1983. We respectfully urge appropriation of the full amount of the President's request.

Lake Aquilla is urgently needed as a dependable source of water supply for the City of Hillsboro and other nearby communities in Hill, Johnson and McLennan Counties. These communities are facing potentially serious water shortages due to inadequacy of their well water supplies, and Lake Aquilla is the only feasible source of dependable water supply to meet their pressing needs.

Lake Aquilla is also needed as an element of the Corps of Engineers' basin-wide flood control system. It will provide control of floods from Aquilla Creek, the only major tributary of the Brazos River upstream of the Waco metropolitan area which still remains uncontrolled.

It is important that Lake Aquilla be completed at the earliest practicable date, and appropriation of the full amount of \$5,500,000, as requested by the President, is necessary in order for construction of the project to proceed on schedule.

SAN GABRIEL RIVER PROJECT (SOUTH FORK LAKE)

The Brazos River Authority respectfully urges approval of the President's request for appropriation of \$550,000 in FY 1983 for continuation of advance engineering and design on South Fork Lake.

Three reservoirs are included in the authorized San Gabriel River Project: Lakes Granger, Georgetown and South Fork. Deliberate impoundment of water in Lakes Granger and Georgetown was initiated early in 1980, and already almost all of the water supply to be provided by these lakes is committed under contracts to meet municipal and industrial water needs in the vicinity of the lakes and in areas downstream. Planning of South Fork Lake was suspended pending need for the additional water supplies that could be provided from this final unit of the authorized San Gabriel River Project. Williamson County, in which the San Gabriel River Project is located, is experiencing the most rapid population growth in the entire Brazos River Basin, and the water supplies to be provided by South Fork Lake are urgently needed at the earliest practicable date in order to help meet the growing municipal and industrial water needs of this area.

The Brazos River Authority therefore respectfully urges the appropriation of the full amount of \$550,000 requested in the President's Fiscal Year 1983 budget for continuation of advance engineering and design of South Fork Lake.

BRAZOS NATURAL SALT POLLUTION CONTROL PROJECT

The Brazos River Authority respectfully urges approval of the President's request for appropriation of \$217,000 for continued planning and design of the Brazos Natural Salt Pollution Control Project in Fiscal Year 1983.

Salt water seeps and springs concentrated in a relatively small area of the upper Brazos River Basin discharge an average of 600 tons of salt per day into the main stem of the Brazos River. As a result, main stem Brazos River water is too salty for use with conventional treatment as a municipal water supply in the upper 75 percent of the Brazos Basin, where the needs for additional municipal water supplies are becoming increasingly urgent, and the effects of the natural salt pollution are felt in varying degree all the way to the mouth of the river, despite the diluting effect of good quality water brought into the main stem by downstream tributaries of the Brazos. The Natural Salt Pollution Control Project will significantly im-

prove the quality of water in the main stem of the river for a distance of more than 900 river miles and will allow it to be put to most effective use to help meet the present and future water needs of the people of Texas.

BRAZOS RIVER AND TRIBUTARIES STUDY

The President requested \$400,000 for continuation of this study in FY 1983. We respectfully request that the full amount included in the President's budget be appropriated.

STATEMENT OF BERNIS W. SADLER, MAYOR, PORT ARTHUR, TEX.

The City of Port Arthur must strongly oppose the proposed Taylor's Bayou Project including the pending request of Jefferson County Drainage District No. 6 for \$1,700,000 for Phase 1 of that project (1983 Budget), because certain features of the project would have severe negative impact on the land use and growth potential of certain property within and adjacent to the City of Port Arthur, Texas. Also, certain features of the project would seriously interfere with and substantially add to the costs of the City's sanitary landfill operation.

Although the City has previously supported the Taylor's Bayou Project, only very recently did the City learn of the specific location and intended use of a 906 acre tract, presently owned by Sabine Production Company, to be acquired by the Project sponsors as Disposal Areas 1 and 2 for perpetual spoiling of dredged materials and as a perpetual waterfowl habitat. This will have a very detrimental effect on the economy and the present and future tax base of the City of Port Arthur, in that this land, a portion of which is within the corporate limits of the City and the remainder of which is in process of being annexed, is extremely valuable for industrial development purposes. This particular area, near the City's main industrial and port areas, is one of the last few large areas on the ship channel also having highway frontage. The ship channel runs along one side of the property in virtually a straight line, thus it is unusually well suited for shipping purposes. A substantial number of jobs and tax revenues can be anticipated from industrial development of this property.

We must reiterate our objections to another feature of the Project, Disposal Site 6N, designated in Phase 2 of the Project for acquisition as a perpetual spoil disposal and waterfowl habitat site. The City has been negotiating with the landowners to acquire some 250 acres in this site for property needed to expand the City's landfill operation. The City has two to three years of usage remaining at the present site. The Project use of this adjacent land will force the City to look elsewhere and actually relocate our landfill operation. Any relocation of the landfill operation will require considerably more expense than use of the adjacent property.

It should be noted that at a meeting requested by the City on March 18, 1982, held at the Port Arthur City Hall, the sponsors of this Project, the Corps, some of the other governmental agencies involved, Sabine Production Company, and the City of Port Arthur all agreed to attempt to work out a compromise plan whereby spoiling on the 906 acre Sabine Production Company tract would be limited to the initial construction period of three years and the perpetual spoilage and waterfowl habitat would be relocated elsewhere, and whereby the spoil disposal and waterfowl habitat site 6N adjacent to the City landfill operation would be relocated elsewhere. If the settlement is accomplished, I will so advise this Committee. However, until and unless these matters are settled, the City must oppose the Project.

It is unfortunate that the Corps and Project sponsors did not see fit to inform and consult with the City of Port Arthur about these features of the Project with obvious potential import to the City. In all probability, the City's objections could have been worked out in the Project plans long ago. The City of Port Arthur regrets the necessity of objecting at this time to the Project.

STATEMENT OF W. R. BOHON, PRESIDENT, PHILLIPS COAL CO., RICHARDSON, TEX.

Phillips Coal Company is vitally interested in the development of the vast lignite coal resources of the Gulf Coast States as one of the new energy sources essential to the future security and quality of life of this nation. New energy development in Texas is greatly dependent upon the availability of adequate and reliable sources of water. With rapid industrial and population growth experienced recently and projected for the future, continued development of new water resources, such as that proposed by the Brazos River Authority, is essential to the future of Texas.

Much of Texas, especially in the upper half of the Brazos Basin, is experiencing a drastic decline of water resources due to depletion of underground reserves. Underground aquifers, like the Ogallala, are not being replenished anywhere near as rapidly as they are being depleted. This situation is compounded by the fact that existing surface reservoirs are rapidly becoming committed for various agricultural, municipal and industrial uses. With predictable shortages underground and in the existing reservoirs, many communities are facing a critical situation in the very near future. The economic and social health of Texas' future hangs in the balance, and the projects in this appropriation are essential in providing for that future.

As the state population expands, future water sources are especially critical for development of adequate electric generation capacity through development of the valuable reserves of lignite coal. Development of new electricity generating capacity utilizing local lignite reserves promises to be the most economical and cost-effective source of new energy for the State of Texas. However, the availability of adequate water, especially in the Brazos Basin, is critical in planning for this new energy source.

It should be pointed out that development of the projects by the Brazos River Authority will benefit the State's economy and offer greater benefits to more people than any other similar projects in the State. Not only will municipalities benefit from flood control and new water supplies, but more resources will be available for the diverse agricultural interests of the Basin, plus they will provide water needed in the lignite development projects proposed for the Brazos Basin.

The development of the Brazos Basin of Texas by the Brazos River Authority has paralleled the development of agriculture and industry across a major part of the State's midsection. The impressive record of cost-benefit ratios on projects by the Brazos River Authority reflect the sound economic growth of the region. Without a continuous development plan such as that already underway and proposed for continuation by the Brazos River Authority, valuable support for the economic development of a large section of Texas will be threatened or curtailed. Therefore, it is essential that the following appropriations be approved in the Fiscal Year 1983 for the Corps of Engineers projects in the Brazos River Basin:

<u>Project</u>	<u>Appropriation Requested</u>
Lake Millican	\$600,000 for continuation of advance engineering and design.
Lake Aquilla	\$5,500,000 for continuation of construction.
San Gabriel River Project (South Fork Lake)	\$550,000 for continuation of advance engineering and design.
Brazos Natural Salt Pollution Control Project	\$217,000 for continuation of advance engineering and design.
Brazos River and Tributaries Study	\$525,000 for continuation of study.

As Texas economic growth continues to increase in intensity, the threat of a water shortage has been identified as the one most threatening constraint. Since much of the major growth in population, industrial and energy development, and agricultural expansion is projected to occur in or near the Brazos Basin, it is easy to conclude that development of the resources of the Brazos River as proposed by the Brazos River Authority are essential -- not only for industry, agriculture and municipalities within the region, but essential for all citizens of Texas.

STATEMENT OF HARVEY DAVIS, EXECUTIVE DIRECTOR, TEXAS DEPARTMENT OF WATER RESOURCES

The Texas Department of Water Resources respectfully submits the following testimony regarding Corps of Engineers public works projects located in the Brazos River Basin of the State of Texas.

Responsibility for Statewide planning and development of water resources rests with the Texas Department of Water Resources. The Department has been statutorily designated as the State agency to cooperate with appropriate agencies of the Federal government and with other State and local governmental entities in matters relating to water resources development. In order to assure orderly development and management of the State's water resources, the Department has formulated and adopted a comprehensive Statewide plan known as the "Texas Water Plan," which under Texas statutes serves as the official guide for future water development in Texas.

The plan indicates the need for specific projects, including alternatives, to meet the State's water needs and to provide for State, regional, and national economic growth and stability. The Department of Water Resources maintains a continuing planning program in order to keep the plan current to address changing economic, social, hydrologic, and environmental conditions in the State. The projects which we offer testimony on to this Subcommittee are all integral elements of the State's water plan.

BRAZOS RIVER AND TRIBUTARIES

The Brazos River Basin has a total drainage area of slightly more than 45,500 square miles and includes an area extending from eastern New Mexico across the State of Texas to the Gulf of Mexico.

The basinwide study is considering problems and developing solutions in order to determine the need for flood control, hydroelectric power, navigation, irrigation, municipal and industrial water supply, recreation and other water related purposes.

The Texas Department of Water Resources fully supports approval of the President's request for appropriation for \$400,000 during FY 1983 for continuation of the Brazos River and Tributaries Study.

BRAZOS NATURAL SALT POLLUTION CONTROL PROJECT

A supplemental preauthorization study of remedial measures to further reduce the natural salt pollution occurring in the basin has been included as an additional objective in the basinwide study. The Texas Department of Water Resources supports the President's request for appropriation of \$217,000 to complete Phase I of planning and design for the Brazos Natural Salt Pollution Control Project in Fiscal Year 1983, allowing continuation of the project to move forward in a timely and responsive manner. The Natural Salt Pollution Control Project will significantly improve the quality of water in the main stem of the river for a distance of more than 900 river miles and will allow it to be put to most effective use to help meet the present and future water needs of the people of Texas.

MILLICAN LAKE

The Millican Lake Project is an integral component of the Brazos River Basin, multiple-project system of flood control and water supply storage facilities. It is the last major element in the Corps of Engineers basinwide plan for flood control in the lower Brazos River Basin. The project is urgently needed to meet the rapidly-expanding water supply requirements of the entire lower basin and adjoining coastal areas, including the Houston-Galveston metropolplex. Control of land subsidence in the coastal area adjacent to the lower Brazos Basin, which results primarily from local overdrafts of ground water, has already created demands in the area such that surface-water supplies will be needed in increasing quantities in the very near future. Inasmuch as existing basin reservoir yields are almost entirely committed under contract, meeting the increased water needs in the lower basin and adjoining coastal areas can be achieved only with the construction of Millican Lake. Water from Millican Lake can also be

used to meet lower basin needs now being met by water released from other lakes in the Brazos system, and thus will free up water to meet future needs throughout the Brazos Basin.

In view of the urgent need for freshwater downstream from Millican Lake to alleviate land subsidence in neighboring areas, and to meet energy and manufacturing requirements, it is imperative that the construction of Millican Lake be accomplished at the earliest possible date. For these reasons, the Texas Department of Water Resources feels that it is essential to provide the Corps of Engineers with adequate funding for continued planning and design in order to prevent further undue delays in constructing Millican Lake to its fullest potential.

The Department respectfully urges an appropriation of the President's recommended budget amount of \$600,000 for post authorization planning and design work during FY 1983.

SAN GABRIEL RIVER PROJECT

The authorized plan of improvement for the San Gabriel River Project consists of a system of three lakes in Williamson County in the San Gabriel watershed of the Brazos River Basin. Lakes Granger, Georgetown, and South Fork were authorized by the Flood Control Acts of 1952 and 1962.

The lakes will provide storage for flood control, municipal and industrial water supply, and recreational benefits and are an important unit in the Corps' Brazos River Basin system of multiple-purpose water resource development projects. Deliberate impoundment of water in Lakes Granger and Georgetown was initiated early in 1980, and already almost all of the water supply to be provided by these lakes is committed under contract to meet municipal and industrial water needs in the vicinity of the lakes and in areas downstream. South Fork Lake is the only component of the project not completed.

The Texas Department of Water Resources supports the President's request for an appropriation of \$550,000 to continue advanced engineering and design of South Fork Lake of the San Gabriel River Project during FY 1983.

AQUILLA LAKE

The Texas Department of Water Resources respectfully requests the appropriation of construction funds to permit the orderly completion of the Aquilla Lake Project on Aquilla Creek, Brazos River Basin, Texas near the municipalities of Hillsboro and West, Texas.

Aquilla was authorized by Congress in the Flood Control Act of 1968 and has progressed substantially since FY 1971, when funds for the initiation of preconstruction planning were first appropriated. The project has annually received appropriations for continued construction since FY 1976.

The urgent need for the dependable water supply, flood control, and benefits of recreation in the area of this project justifies funding for continued construction of Aquilla Lake in FY 1983. Therefore, the Department urges an appropriation in the amount of \$5,500,000 for continued construction in order to maintain the anticipated completion schedule for this project.

CONCLUDING COMMENTS

The Texas Department of Water Resources sincerely appreciates this opportunity to provide testimony to the Committee and most respectfully urges the appropriation of funds as requested in order to accomplish properly coordinated, timely, and orderly development of these vitally needed water resource projects in the Brazos River Basin of the State of Texas.

STATEMENT OF R. W. OLIVER, JR., PRESIDENT, HEART OF TEXAS COUNCIL OF
GOVERNMENTS

The Heart of Texas Council of Governments is a voluntary association of governments in Texas' State Planning Region XI.

Each of the six counties in the Region is partially or entirely located within the Brazos River Basin. HOTCOG and its member governments are therefore interested in the conservation and development of the Brazos River Basin's water resources, and consider that development to be an investment in the future of the Region. The Heart of Texas Council of Governments supports the FY82 appropriation requests for the Corps of Engineers projects in the Brazos River Basin described elsewhere in this letter.

The Heart of Texas Council of Governments supports appropriations for the following projects for FY83:

Lake Millican

The President has requested \$600,000 to continue the planning and the designing of Lake Millican. Lake Millican is the only planned remaining large source of water for its surrounding area. (All other sources are almost completely committed.) Development of the lignite coal deposits in the area depends on quantities of water only Lake Millican could provide. Until the lake is developed the lower Brazos River Basin remains in danger of flooding throughout the 2200 square mile Navasota River watershed. Water from Lake Millican will also free committed water from lakes and other sources to be used for other purposes.

We urge approval of the \$600,000 the President requested for this project.

Lake Aquilla

The President has requested \$5,500,000 for the continued construction of Lake Aquilla for FY83.

Lake Aquilla will become the only source from which to replace water that can no longer be adequately supplied by groundwater to Hillsboro and to other Hill County communities. This new source of water is urgently needed. The lake will also control flooding throughout the Aquilla Creek watershed, and complete the Corps of Engineers flood control project in that area of the Brazos River Basin. Aquilla Creek is presently uncontrolled.

We urge the full request of \$5,500,000 be appropriated.

San Gabriel River Project (South Fork Lake)

We advise the committee to recommend the appropriation of the President's request of \$550,000 to continue the advance engineering and design of the South Fork Lake of the San Gabriel River Project (which also includes Lake Granger and Lake Georgetown).

South Fork Lake's planning was suspended until water from the other two lakes in the project was fully committed. That water is now fully committed. South Fork Lake will provide municipal and industrial water for Georgetown and for Williamson County (just north of Austin), an area whose population grew 105 percent between 1970 and 1980 according to the Bureau of the Census.

Brazos Natural Salt Pollution Control Project

We strongly advise the appropriation of the President's request of \$217,000 to continue planning the design of the Brazos Natural Salt

Pollution Control Project. Six hundred tons of salt daily are naturally discharged into the Brazos River by salt water seeps and springs located in a comparatively small area of the upper Brazos River Basin. This makes normal municipal water treatment of the Brazos River's water impossible for communities in the upper three quarters of the Brazos River Basin where the water is direly needed. The project will desalinize Brazos River water and improve water quality for 900 miles along the river. It will allow communities to treat and use water that is now denied them.

Brazos River and Tributaries Study

We urge the committee recommend the appropriation of \$525,000 for the Brazos River and Tributary Study. (The President has requested \$400,000, but the Corps of Engineers can use at least \$125,000 more.)

This project will enable the Corps of Engineers to study the possibility of converting some of Lake Waco's flood control storage space into conservation storage space. If this can be done, it will increase the dependable water supply of the lake. The City of Waco will concurrently investigate the possibility of providing treated water from Lake Waco to surrounding communities in its metropolitan area to replace diminishing groundwater supplies those communities now entirely rely upon. These communities' need for new water supplies is urgent because of an expected 32% increase in population in this metropolitan area by the year 2000. This project may allow them to buy what they need from the City of Waco.

STATEMENT OF HENRY MOORE, SECRETARY, AQUILLA WATER SUPPLY DISTRICT, HILLSBORO, TEX.

We respectfully request that this statement be included in the record of your subcommittee in support of an appropriation for Lake Aquilla in the fiscal year 1983 budget.

The Corps of Engineers has expressed a capability of spending \$5,500,000 in fiscal year 1983. We understand that the President's budget asks that this full amount be appropriated. We urge your subcommittee to recommend that this amount be appropriated.

The Aquilla Water Supply District was created by the Texas Legislature in 1977. It is the entity that will treat water from Lake Aquilla and transport the treated water to customers. We will wholesale treated water to the cities of Hillsboro and Grandview and to several rural water supply corporations in our area. The total water supply yield of Lake Aquilla is 9.7 million gallons per day. All of this water has been contracted by users in this area.

We know the critical water supply problems being experienced in our area. The City of Hillsboro, Texas, pumps water from its wells at capacity rates during part of the year. The wells are old and the quality of the water is not good. Water rationing may be necessary before Lake Aquilla water is available.

In a few weeks the Aquilla Water Supply District will let bids for the construction of treatment and transmission facilities. These facilities will be completed about the same time that water is available in the lake—assuming that the lake construction remains on schedule. The full amount of the Corps' capability must be appropriated for fiscal year 1983 in order for the lake construction to remain on schedule.

We will have representatives at your subcommittee hearings on March 31, 1982 to further speak in support of the requested appropriations. We thank you for your attention and consideration.

STATEMENT OF RONALD RHOADS, MAYOR, HILLSBORO, TEX.

The City Council of the City of Hillsboro, Texas request appropriations during fiscal year 1983 for continuation of the Aquilla Lake Project, Brazos River Basin, Hill County, Texas.

The Corps of Engineers have expressed a capability of \$5,500,000 for construction funds to be used in fiscal year 1983 for the Aquilla Lake Project. It is our understanding the full amount requested is included in the President's budget, and ask that your sub committee approve this amount of funds.

The City of Hillsboro has an immediate need for a dependable surface water supply to replace the ground water supply that is inadequate to meet Hillsboro's growth and expansion in industrial, commercial, and residential development.

The Corps of Engineers estimated date for the impoundment of water in Aquilla Lake is May of 1983. Completing construction as scheduled will make available an abundant water supply without further investments and cost in drilling additional water wells which in this area are low producing in volume and poor quality.

The Aquilla Lake has been a successful project because each year your committee has responded to our needs and we sincerely hope you can continue to receive financial support for this project.

STATEMENT OF JAMES A. SHOWERS, PRESIDENT, HILLSBORO (TEX.)
CHAMBER OF COMMERCE

After many years of diligent and concentrated effort by the citizens of this area and with the assistance of Congress and the Corps of Engineers, Lake Aquilla is almost completed. The critical need of this area for a dependable source of water increases each year. The City of Hillsboro and all of the surrounding rural water supply corporations must depend entirely upon ground water sources; the water levels in these wells are rapidly declining and the quality of the water is so poor that residents have to be periodically notified in writing of the dangers to their health from consuming the water.

The Aquilla Water Supply District, the local entity that will treat and transport the treated water to the consumers, will soon let bids for the construction of the treatment and transmission facilities. These facilities will be completed about the same time that water becomes available from the Lake, assuming that the Lake construction remains on schedule. The Corps of Engineers has expressed a capability of spending \$5,500,000 in fiscal year 1983; the President's budget asks that this full amount be appropriated.

The Hillsboro Chamber of Commerce respectfully requests that the full amount of the Corps' capability be appropriated for fiscal year 1983 in order that construction of Lake Aquilla might remain on schedule and be soon completed.

We are asking that the representatives of this area who will be present for your subcommittee hearings on March 31, 1982, present this written statement in addition to the oral presentations.

STATEMENT OF WADE TERRELL, EXECUTIVE VICE PRESIDENT, GREATER WACO (TEX.)
CHAMBER OF COMMERCE

The Brazos River Authority, an agency of the State of Texas, is responsible for conserving and developing the water resources of the Brazos River Basin in Texas, an area of about 42,000 square miles.

The Authority considers expenditures for water resource development to be necessary investments for the future prosperity and welfare of the nation and its citizens. The Authority supports requests for appropriation of the following amounts for fiscal year 1983 for Corps of Engineers projects in the Brazos Basin:

PROJECT	APPROPRIATION REQUEST
Lake Millican	\$600,000 for continuation of advance engineering and design
Lake Aquilla	\$5,500,000 for continuation of construction
Brazos Natural Salt Pollution Control Project	\$217,000 for continuation of advance engineering design
Brazos River and tributaries Study	\$400,000 for continuation of study

The Greater Waco Chamber of Commerce supports this request for appropriation.

STATEMENT OF ENAR B. OLSON, MAYOR, GRANBURY, TEX.

The City of Granbury, Texas, wishes to go on record as strongly supporting the urgent need for the U.S. Corps of Engineers' projects relating to making the water of the Brazos River potable, and for increasing the amount of Brazos River water available for municipal users. Insofar as Granbury is concerned, this especially includes the Brazos Natural Salt Pollution Control Project and the Lake Millican Project.

The City of Granbury is face to face with serious water shortages due to the increasingly rapid lowering of the water table from which all municipal and domestic users of water in Hood County, Texas, now secure their water. We understand that the annual allotment of 1100 acre feet of water which the Brazos River Authority has designated in their planning for use by the City of Granbury is all they can make available for this purpose unless and until further water might be freed up by projects such as the Lake Millican Project. In addition, the present high salt content of this water severely taxes the state of the art methods for treating this water so as to make it useable for municipal purposes.

Hood County, in which Granbury is located, had the highest rate of growth percentagewise of any county in Texas for the period of the recent national census. Forecasts are that this rate of growth will continue. It is obvious that the quality and quantity of water which can be made available to Granbury and immediately adjacent areas from the Brazos River for municipal purposes must be significantly improved and increased as soon as possible if pressing population needs are to be met.

We urge your subcommittee to act favorably with respect to these Corps of Engineers' projects in the Brazos Basin.

STATEMENT OF H. D. TROTTER, VICE PRESIDENT, PHILLIPS PETROLEUM CO.,
BARTLESVILLE, OKLA.

This letter is in support of the Brazos River Authority request that funding be approved for Fiscal Year 1983 to allow the Corps of Engineers to continue development work in the Brazos River Basin.

Phillips recognizes the need for an adequate supply of water for domestic, municipal, agricultural, and industrial purposes. We also recognize the need for flood control and pollution control. These needs can best be met through the timely development and implementation of a well planned program for the proper use of water resources.

Phillips has significant interests in and near the Brazos River Basin. We own and/or operate oil, gas and coal production facilities as well as related transportation, processing and manufacturing facilities in the area. All of these operations are important to local, state and national interests.

Development and operation of these facilities requires an adequate supply of water. The continuing growth in the area has resulted in an increased demand for water such that the supply is marginal for present purposes. Unless steps are taken to provide additional water supplies, this water shortage can become critical to the point that the production and processing of oil, gas and coal in the area can be restricted.

Because sufficient high quality water is so essential to the economic security of the local area as well as of the state and nation, we urge your support of the Brazos River Authority request that funding be approved for Fiscal Year 1983 to allow the Corps of Engineers to continue the orderly and cost effective development and control of the valuable water resource in the Brazos River Basin.

STATEMENT OF JOHNNY S. LAMPO, PRESIDENT, BRAZOS COUNTY INDUSTRIAL FOUNDATION,
INC., TEXAS

The Brazos County Industrial Foundation, Inc. represents a broad cross section of the Brazos County, Texas community. This organization has the responsibility of development of the community for the maximum benefit of its residents.

Brazos County was designated as a Standard Metropolitan Statistical Area (SMSA) in the 1970 census, and the 1980 census showed the Bryan-College Station SMSA to be the fastest growing SMSA in Texas and having the sixth fastest rate of growth in the nation.

Due to this rapid growth rate, there is even more need for an accelerated program of developing the water resources on the Navasota River. These water resources will be needed sooner than expected because of the population growth, mining of lignite, and rapid industrial development within Brazos County.

Lake Millican, proposed on the Navasota River, is apparently needed as soon as possible to provide additional water supplies and flood control in this area. Therefore, the undersigned Board of Directors unanimously supports the recommendations of the U. S. Corps of Engineers to develop water resources on the Navasota River and request that the U. S. Congress provide \$600,000. for the continuation of advanced engineering and design on the proposed Lake Millican.

We urge you to give the most possible favorable and positive consideration to this request, so that the water needs of our area can adequately be met to support this area's rapid growth.

STATEMENT OF THE CITY OF COLLEGE STATION, TEX.

The City of College Station is one component of the sixth fastest growing Standard Metropolitan Statistical Area in the United States and the fastest growing metropolitan area in the State of Texas.

This area has traditionally relied upon ground water sources for supply and has developed (without Federal Aid) the existing aquifers to meet the booming demand.

Prudent planning and hydrologic projections show us as reaching the limits of development of these ground water sources between 1990 and 1995. This area must see the development of the Navasota River as a source of potable water in this period. The Lake Millican project is the most logical and practical project being proposed to satisfy this future critical need as well as the provision of obvious benefits from flood control and downstream usage of excess water storage capacity. We urge the inclusion of the full \$600,000 as proposed in the President's budget for the Lake Millican advanced engineering and design.

STATEMENT OF W. T. CROUCH, PRESIDENT, FILES VALLEY WATER SUPPLY CORP.,
ITASCA, TEX.

Please include this statement in the records of your sub-committees in support of the appropriation of \$5,500,000 in the Fiscal Year 1983 budget for the Lake Aquilla project of the Corps of Engineers.

We are a non-profit corporation that sells water to hundreds of customers in the northeastern portion of Hill County, Texas. We have contracted for water from Lake Aquilla. We are urging that Lake Aquilla be completed at the earliest possible time because of the water supply shortages that will result until the Hill County area has a dependable source of surface-water supply from Lake Aquilla.

Representatives of the Aquilla Water Supply District will be in Washington on March 31 for your hearings and we request that you give their testimony favorable consideration and make the requested appropriation.

STATEMENT OF J. STEPHEN ARDEN, PRESIDENT, BRYAN-COLLEGE STATION (TEX.)
CHAMBER OF COMMERCE

The Bryan-College Station, Texas Chamber of Commerce represents a broad cross section of the Brazos County, Texas community. This organization has the responsibility of development of the community for the maximum benefit of its residents.

Brazos County was designated as a Standard Metropolitan Statistical Area (SMSA) in the 1970 census, and the 1980 census showed the Bryan-College Station SMSA to be the fastest growing SMSA in Texas and having the sixth fastest rate of growth in the nation.

Due to this rapid growth rate, there is even more need for an accelerated program of developing the water resources on the Navasota River. These water resources will be needed sooner than expected because of the population growth, mining of lignite, and rapid industrial development within Brazos County.

Lake Millican, proposed on the Navasota River, is apparently needed as soon as possible to provide additional water supplies and flood control in this area. Therefore, the undersigned Board of Directors unanimously supports the recommendations of the U. S. Corps of Engineers to develop water resources on the Navasota River and request that the U. S. Congress provide \$600,000. for the continuation of advanced engineering and design on the proposed Lake Millican.

We urge you to give the most possible favorable and positive consideration to this request, so that the water needs of our area can adequately be met to support this area's rapid growth.

STATEMENT OF JOHN S. BUTNER, EXECUTIVE VICE PRESIDENT, CLEBURNE (TEX.)
CHAMBER OF COMMERCE

Cleburne, Texas is the county seat of Johnson County, a portion of which is in the Brazos River Basin. The Brazos River is the boundary between Johnson and Bosque Counties. Therefore, anything that affects the Brazos River Basin is of vital concern to the Cleburne Chamber of Commerce.

LAKE MILLICAN

The Cleburne Chamber of Commerce joins the Brazos River Authority in urging approval of the appropriation of \$600,000 for continuation of advance engineering and design for continuation of construction.

A large portion of the water supply yields of the upper Brazos River Basin is committed and construction of Lake Millican, with its attendant yield, would release some of this water in the upper basin provided its salt content is reduced, for use by municipalities and other entities near lakes in that basin.

BRAZOS NATURAL SALT POLLUTION CONTROL PROJECT

The Chamber of Commerce joins the Brazos River Authority in urging approval of the President's request for \$217,000 for continued planning and design of the Brazos Natural Salt Pollution Control Project in Fiscal Year 1983.

As it has in the past, the Chamber not only urges the appropriation for study of the project, but urges implementation of measures to control this salt pollution in the Brazos.

If the pollution is controlled, the water can be made usable by municipalities, thus easing predicted water shortages which have been forecast for the entire area, including the Dallas/Fort Worth Metroplex and surrounding cities and towns, one of which is Cleburne.

Your favorable consideration of these requests will be appreciated.

STATEMENT OF EUGENE LOEWE, PRESIDENT, HILL COUNTY WATER SUPPLY CORP., TEXAS

We respectfully request that this statement be included in the record of your subcommittee in support of an appropriation for Lake Aquilla in the fiscal year 1983 budget.

The Corps of Engineers has expressed a capability of spending \$5,500,000 in fiscal year 1983. We understand that the President's budget asks that this full amount be appropriated. We urge your subcommittee to recommend that this amount be appropriated.

The Aquilla Water Supply District was created by the Texas Legislature in 1977; it will treat water from Lake Aquilla and transport the treated water to customers, including Hill County Water Supply Corporation which serves approximately 550 rural families.

We will have representatives at your subcommittee hearings on March 31, 1982 to further speak in support of the requested appropriations. We thank you for your attention and consideration.

LETTER FROM C. L. CHANCE, COUNTY JUDGE, WILLIAMSON COUNTY, TEX.

March 28, 1982

Brazos River Authority
4400 Cobbs Drive
P. O. Box 7555
Waco, Texas 76710

Re: San Gabriel River Project
South Fork Lake

Gentlemen:

Please convey to the Sub-committee on Energy and Water Development our urgent appeal to have the work on the South Fork Lake on the San Gabriel River undertaken at an early date. The need for additional water in this area is very apparent, and we wish to address the problem before it becomes an emergency.

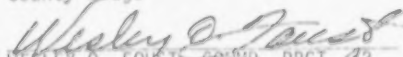
You will find appending hereto our Resolution passed on the 3rd day of December, 1979 publicly urging this project.

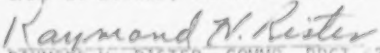
Thank you for your assistance in this matter.

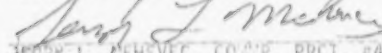
Very sincerely,


C. L. CHANCE
County Judge


CARL E. LIDELL, COMM. PRCT. #1


WESLEY O. FOUST, COMM. PRCT. #2


RAYMOND H. RISTER, COMM. PRCT. #3


JERRY L. HEHVEC, COMM. PRCT. #4

P.S. This letter will be conveyed by City Manager of Round Rock, Bob Bennett.

December 3rd., 1979

Motion was made by Wesley Foust and seconded by Carl Lidell to authorize Judge Chance to sign the following Resolution concerning the South Fork Dam and forward copies to persons interested in water control. Motion carried by unanimous vote of the Court.

VOL 21 PAGE 250

COMMISSIONERS' COURT MINUTES
WILLIAMSON COUNTY, TEXAS
December 3, 1979

A RESOLUTION

THE STATE OF TEXAS |

COUNTY OF WILLIAMSON |

Pursuant to law, the Commissioners' Court of Williamson County, Texas, convened in a Regular Session on the 3rd day of December, 1979, at their regular meeting place in the County Courthouse in Georgetown, Texas, with the following members present:

Carl Lidell, Commissioner, Precinct One
Wesley Foust, Commissioner, Precinct Two
Raymond Rister, Commissioner, Precinct Three
Jerry Mehevec, Commissioner, Precinct Four

and being four members and a quorum, among other proceedings, found that:

WHEREAS, the United States Army Corps of Engineers is nearing completion of its current projects on the San Gabriel River near Granger and on the North Fork of the San Gabriel River near Georgetown, and

WHEREAS, the Court recognizes and applauds the efforts thus far expended on these projects, and

WHEREAS, the need exists for further protection of lives and property along the San Gabriel River through flood control and,

WHEREAS, there is a need for an abundant supply of surface water for the burgeoning population of Williamson County and the surrounding area and

WHEREAS, the rapid growth of the general populace as well as the broad-based economic growth of the county call for foresight in planning for the essential needs of people and industry, and

WHEREAS, the development of the South Fork area is under way and can be expected to rapidly proceed with current population trends and

WHEREAS, this growth will cause an escalation of property values and therefore will result in the increased cost of a project on the South Fork and

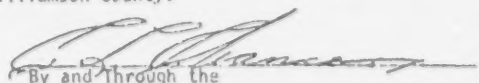
WHEREAS, for these reasons the need for immediate commencement of a project on the South Fork is manifest,

NOW THEREFORE, be it resolved, ordered and decreed that:

The Commissioners' Court of Williamson County, Texas supports and urges the immediate commencement of a flood control and water conservation project on the South Fork of the San Gabriel.

The County Judge of Williamson County be authorized to sign this RESOLUTION and communicate it to all our representatives and the appropriate authorities.

WHEREUPON, by motion of Wesley O. Foust, seconded by Carl E. Lidell, all members of the Commissioners' Court voted for the Resolution and none voted against it; the Resolution passing, County Judge C. L. Chance was authorized to sign said Resolution on behalf of Williamson County.


By and through the
Authority of the Commissioners' Court
Williamson County, Texas

STATEMENT OF BILL DAVIS, MAYOR, WACO, TEX.

The City of Waco respectfully requests appropriation of funds in the following amounts in Fiscal Year 1983 for Corps of Engineers projects in the Brazos River Basin, Texas:

Lake Millican - \$600,000 for continuation of advance engineering and design

Lake Aquilla - \$5,500,000 for continuation of construction

Brazos Natural Salt Pollution Control Project - \$217,000 for continuation of advance engineering and design

Brazos River and Tributaries Study - \$400,000 for continuation of study

Lake Millican

Lake Millican will provide water supplies to meet urgent municipal and industrial needs in the immediate vicinity of the lake and in areas downstream. Lake Millican will also free up water which is now committed to meeting system needs in the Brazos River Authority's basin-wide water supply system, so that such water may be used to satisfy growing needs in the vicinities of other lakes in the system. The full amount of \$600,000 requested in the President's budget for Fiscal Year 1983 is needed to assure that planning and design may continue without delay.

Lake Aquilla

The Lake Aquilla project will provide control of flooding on Aquilla Creek, the last major uncontrolled tributary of the Brazos River upstream of the Waco metropolitan area. In addition, it will provide needed water supplies for the City of Hillsboro and a number of other communities in the project area. The full amount of \$5,500,000 requested by the President is needed to assure timely completion of Lake Aquilla.

Brazos Natural Salt Pollution Control Project

By reducing the amount of naturally-occurring salt which is introduced into the Brazos River from an area of salt seeps and springs in the upper Basin, the Brazos Natural Salt Pollution Control Project will significantly improve the quality of water in the main stem of the river for a distance of more than 900 river miles, and allow this water to be put to use to help meet present and future water needs of the people of Texas. The full amount of \$217,000 requested in the President's budget for Fiscal Year 1983 is needed for continued planning and design of this project.

Brazos River and Tributaries Study

The City of Waco is undertaking studies to determine the feasibility of providing treated water supplies from Lake Waco to meet the municipal water needs of other cities in the Waco metropolitan area which are seeking a dependable water supply to replace their inadequate ground-water supplies. In order to meet these needs, it is desirable to continue the exploration of the possibilities of increasing the amount of conservation storage space in Lake Waco so as to increase the long-range dependable water supply yield that can be made available from this project.

The City of Waco urges the appropriation of \$400,000 as outlined in the President's 1983 Fiscal Year budget. It is important that these studies be accomplished without delay so that a response to the needs expressed by the cities in the Waco metropolitan area may be made as soon as possible.

STATEMENT OF LES T. LARSON, PRESIDENT, ALVIN-MANVEL (TEX.) AREA CHAMBER OF COMMERCE

The Alvin-Manvel Area Chamber of Commerce endorses the comments in the Statement of the Brazos River Authority to the Subcommittees on Energy and Water Development of the Committees on Appropriations of the U.S. House of Representatives and the U.S. Senate, dated March 13, 1982.

We realize that Federal funds are involved since the benefits to be derived from the expenditures on the projects described in the Statement will be of benefit not only to those of us living in the Brazos River Watershed but also to people who would receive the products and food that will be more economically manufactured and grown because of the improved water qualities.

As you know food products and industrial products from the watershed area are shipped nation wide and world wide. They make a substantial contribution toward our country's balance of payments as a result of exports into foreign trade.

STATEMENT OF D. H. TAYLOR, BOARD PRESIDENT, WOODROW-OSCEOLA WATER SUPPLY CORP., TEXAS

We have a dire need for an additional water supply in this area to supply the needs of new people who are moving into the area and to support dairy and livestock farms who are hard pressed for adequate water. To fill this need, the Woodrow-Osceola Water Supply Corporation, along with other rural water supply corporations and local towns, have contracted with the Aquilla Water Supply District to furnish water from Lake Aquilla. While good progress has been made on the construction of the Aquilla Dam, there is more work to be done and an adequate water supply will not be assured until the work is complete.

The Corps of Engineers has requested \$5,500,000 for work to be done in fiscal year 1983. We understand that the President's budget includes this amount for Lake Aquilla. We request that you and your committee give careful consideration for the need for the money for this item in the budget for Lake Aquilla.

Many thanks for your support in getting Lake Aquilla built to the point that with a little additional effort the people in this area can realize that their dream of a water supply will be assured.

STATEMENT OF LARRY WRIGHT, COUNTY JUDGE, HILL COUNTY, TEX.

THE COMMISSIONERS' COURT OF HILL COUNTY RESPECTFULLY REQUEST \$5.5 MILLION BE INCLUDED IN THE RECORD OF YOUR SUBCOMMITTEE IN SUPPORT OF AN APPROPRIATION FOR LAKE AQUILLA AS REQUESTED BY PRESIDENT REAGAN.

YOUR CONTINUED SUPPORT IS ESSENTIAL AT THIS TIME FOR THE LAKE CONSTRUCTION TO REMAIN ON SCHEDULE.

STATEMENT OF EMMETT F. LOWRY, MAYOR, TEXAS CITY, TEX.

The City of Texas City has recently completed and placed into operation a 10 million dollar Surface Water Treatment Plant to treat Brazos River water for municipal purposes.

This plant is presently designed to process a maximum of 18 million gallons per day. Additionally, the intake canals and other pertinent parts of the project are built to accommodate expansion of processing facilities to 35 million gallons per day. This facility presently has contracts to supply the majority of the bayfront cities and water districts on the mainland of Galveston County.

While we in Texas City recognize the importance of limiting Federal expenditures in an effort to balance with income, and we fully support the efforts to achieve this objective, we would point out that water from the Brazos River supplies the multi-billion dollar petro-chemical industry located within our City, as well as many of its employees household water throughout the County. Producing the critical energy supplies of this nation, much of which is processed through our local refineries, will require ever increasing amounts of water that could be more readily and dependably supplied by the completion of the proposed work on Lake Millican.

The construction of the Natural Salt Pollution Control project on the upper reaches of the Brazos will significantly improve the quality of water that we process in our City's water plant for the consumption by citizens of the entire area by reducing its salt content substantially.

On behalf of the City Commission and the citizens of Texas City and all of those who are affected as indicated above, we respectfully urge favorable consideration to appropriations requested by the Brazos River Authority on these projects.

STATEMENT OF ELBERT C. HUTCHINS, PRESIDENT, HILL JUNIOR COLLEGE,
HILLSBORO, TEX.

It is my understanding that the Senate Subcommittee on Energy and Water Development will be making decisions in the near future regarding the Lake Aquilla Project under construction in Hill County, Texas. I respectfully request that you support an appropriation for Lake Aquilla in the fiscal year 1983 budget.

I believe that the Corps of Engineers has expressed the ability to spend \$5,500,000 on Lake Aquilla in fiscal year 1983, and President Reagan's budget asks that this full amount be appropriated. We at Hill Junior College urge your subcommittee to recommend an appropriation for the full amount requested.

Hillsboro and surrounding communities are in urgent need of a dependable supply of surface water at the earliest possible date. Hill Junior College depends upon the City of Hillsboro for its water supply, and, while the college is growing, this water supply becomes less dependable each year. Water has become a vital concern for the college, and I am in constant contact with city officials seeking a long-term solution. Their engineers tell me that the water wells which serve the city now do not look promising for the future. It seems that the water table in our area is dropping and becomes more difficult to reach each year. Our only hope for relief is the construction of the Aquilla Reservoir.

Construction is at a most critical stage. The dam has been closed and bids are about to be let for the construction of treatment and transmission facilities. If funding is delayed at this time, the whole project schedule will be thrown off sequence and will result in much more costly construction procedures at a later date.

Again, let me urge your subcommittee to support an appropriation of \$5.5 million in fiscal year 1983 for the Lake Aquilla project. It is vital to the future of Hill Junior College.

STATEMENT OF MIKE ROBINSON, MAYOR PRO-TEM, ROUND ROCK, TEX.,
AND VICE CHAIRMAN, LAKE GRANGER WATER SUPPLY CORP.

Lake Granger Water Supply Corporation is comprised of Granger, Georgetown, Round Rock, Thorndale, Hutto and Taylor all located in southwestern Williamson County. Williamson County was the fastest growing county in the Brazos Basin during the decade of the 70's. The rate of growth experienced during the 1970's is expected to continue. Additional water resources will be urgently needed if the public's health and safety is to be safeguarded. For this reason, we respectfully request that the Subcommittee on Energy and Water Development favorably recommend appropriations, currently in the President's fiscal year 1983 budget, for the construction of the South Fork Lake, Lake Millican and Lake Aquilla in the Brazos Basin.

Your support of these appropriations will be greatly appreciated.

STATEMENT OF BARNEY L. KNIGHT, CITY MANAGER, TEMPLE, TEX.

The City of Temple, Texas, is located in Bell County, on Interstate 35 midway between San Antonio and the Dallas-Ft. Worth area. With a current population of approximately 46,000 people and encompassing 42 square miles, Temple has progressed from a rural farming community to a modern city that not only serves the needs of the agricultural and ranching communities around it, but also the needs of light industry and manufacturing. As late as 1981, the Standard Metropolitan Statistical Area, known as the Killeen-Temple SMSA, indicated that the area in and around Temple is one of the State's and Nation's fastest growing areas.

In 1957, due to a continuing growth of the city, a bond election was held and approved by the people of Temple for the sum of \$2,300,000 from which a raw water pump station would be constructed. This was accomplished and from that time forward, the City of Temple has been actively engaged in projecting and planning ahead for future needs of the Central Texas area. Currently, the City has holding space for 17,500,000 gallons of treated water and 131 acre feet of untreated water. The source of the City water is provided by the Brazos River Authority in general and is currently derived from Lake Belton which is located approximately eight miles from Temple. The average daily demand for water within the City is now at eight million gallons daily, and Temple's projection to the year 2000 indicates that average daily demand will increase to 14.17 million gallons daily.

Based on Temple's experience with water usage and its planning for the future, surrounding communities in recent years have approached Temple and indicated their desires to tie in their existing community water supplies with the City's water system. As a result, the City of Temple has formed a Regional Water System which currently serves seven surrounding communities and is designed to aid their existing water usages and needs. In conjunction with this system, improvements to Temple's existing water supply system were started in 1978 and are still in progress. The costs for the improvements project was in excess of \$17,000,000.

The City of Temple currently shares the concerns of the Brazos River Authority and fully supports its attempts to plan for the future concerning water needs of the area. This area is already in the early stages of water shortage. The certain growth and expansion of Texas, and Central Texas in particular, require continued construction and planning of water supply facilities. These needs are real and of the nature that can only be served by continued long term efforts.

The Corps of Engineers appropriations requests for the Brazos Basin for Fiscal Year 1983, as submitted to the Subcommittees on Energy and Water Development, are deemed to be reasonable and vital requests in that they will insure continued fresh water supplies for this rapidly growing area of the State. We therefore join with the Brazos River Authority and adopt its well reasoned statement. We encourage your approval of the Corps of Engineers funding requests for the Brazos Basin. Water is one resource which we cannot do without.

STATEMENT OF R. E. DALY, MANAGER, WATER RESOURCES, DOW PIPELINE
CO., ANGLETON, TEX.

We respectfully urge approval of the President's request for appropriation of \$217,000 for continued planning and design of the Brazos Natural Salt Pollution Control Project.

The Dow Chemical Company is a user of Brazos River water as well as a supplier to other industries and the City of Freeport, Texas.

Although our location and use of water is near the mouth of the Brazos River and, therefore, will feel less impact of the improved quality, we recognize and support the widespread beneficial effects of this project on the 900 miles of this watercourse. Quality improvement is vital to the efficient utilization and conservation of this valuable natural resource for municipal, agricultural and industrial purposes.

Again, we urge the appropriation of the \$217,000 to expedite this worthwhile endeavor to reduce the serious natural pollution of the Brazos River.

STATEMENT OF DAN MIZE, PRESIDENT, LAKE GRANGER WATER SUPPLY
CORP., TEXAS

The City of Taylor and the Lake Granger Water Supply Corporation both have Domestic Water Contracts with the Brazos River Authority for use of available water from Lake Granger on the San Gabriel River. The combined contracts are for 8.32 mgd. Our engineering surveys show conservatively that the water needs for our service area will exceed 13 mgd by the year 1995.

The San Gabriel River Project is the only appreciable surface water source for Williamson County. Therefore, we wholeheartedly support this project and ask that your Committee look with favor on the appropriations to support the San Gabriel River Project (South Fork Lake).

Lake Millican on the Brazos River Water Shed and part of the Brazos River Authority System will enhance the availability of water in the entire system and thus be helpful in relieving water problems in the system that includes Williamson County. Therefore, we vigorously support this project and ask that your Committee look with favor on the appropriations to support the advancement of this project.

The exact same is true for Lake Aquilla. The progress of the construction of this facility will greatly enhance the Brazos River Authority System of flood control and preserve great quantities of water for domestic, agricultural and industrial use.

We appreciate this opportunity to make our needs known to your Committees in this vital matter.

STATEMENT OF LARRY L. TONN, MAYOR, ROUND ROCK, TEX.

The City of Round Rock is located in Central Texas just north of the state capitol, Austin, in the Brazos River Basin. Round Rock was a sleepy, little community of 2,811 in 1970 and rapidly grew to become the largest city in Williamson County with a population of over 15,000 today. Because of this rapid growth, additional water will be needed by the 1990's to ensure the health, safety and prosperity of our citizens. Construction of the South Fork Lake, Lake Millican and Lake Aquilla will provide the needed relief we expect an expanding city to require.

We urge you to make the appropriations greatly needed for these projects as recommended in the President's budget for fiscal year 1983.

STATEMENT OF MIKE HEILIGENSTEIN, COUNCILMAN, ROUND ROCK, TEX.

Due to the rapid growth in Round Rock, the water demand will increase greatly during the 1990's. For this reason, we urge the Subcommittee on Energy and Water Development to recommend favorably appropriations requested by the Brazos River Authority for Lakes Millican and Aquilla, as well as, South Fork Lake.

Your support of these appropriations, currently in the President's fiscal year 1983 budget, will be greatly appreciated.

RESOLUTION OF CLEBURNE, TEX.

WHEREAS The Energy and Water Development Subcommittees of The Senate and House Appropriations Committees will be receiving testimony on March 31 of all Corps of Engineers Water Resources Projects;

AND WHEREAS the City of Cleburne considers expenditures for water resource development to be necessary investments for the future prosperity and welfare of the nation and its citizens;

AND WHEREAS the President's budget for the Corps of Engineers Water Resource Development, has appropriations requests for the Brazos River Basin of Texas in fiscal year 1982 for the following:

<u>PROJECT</u>	<u>APPROPRIATION REQUESTED</u>
1. Brazos Natural Salt Pollution Control Project	217,000 for continuation of Advance Engineering and Design.
2. Brazos River and Tributaries Study	525,000 for continuation of study.
3. Lake Aquilla	5,500,000 for continuation of construction.
4. Lake Millican	600,000 for continuation of advance engineering and design.
5. San Gabriel River Project (South Fork Lake)	550,000 for continuation of advance engineering and design.

AND WHEREAS all of the above projects are important to the future growth and needs of water resources for the State of Texas.

AND WHEREAS, The City of Cleburne concurs with the great importance of these projects, but feels that the Brazos Natural Salt Pollution Control Project should be given high priority, because salt water seeps and springs concentrated in a relatively small area of the upper Brazos River Basin discharge an average of 600 tons of salt per day into the mainstream of the Brazos River. As a result, main stream Brazos River water is too salty for use with conventional treatment as a municipal water supply in the upper 75 percent of the Brazos Basin, where the needs for additional municipal of the natural salt pollution are felt in varying degree all the way to the mouth of the river, despite the diluting effect of good quality water brought into the main stream by downstream tributaries of the Brazos. The Natural Salt Pollution Control Project will significantly improve the quality of water in the main stream of the river for a distance of more than 900 river miles and will allow it to be put to most effective use to help meet the present and future water needs of the citizens of Texas.

THEREFORE, be it resolved by unanimous decision of the Cleburne City Council, we wholeheartedly endorse all of the above projects as of their importance to the future needs of the citizens in the state of Texas.

PASSED AND APPROVED by the City Council, this 9th day of March, 1982.

RESOLUTION OF FREEPORT, TEX.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF FREEPORT, TEXAS, SUPPORTING THE FUNDING REQUESTS OF THE CORPS OF ENGINEERS FOR WATER PROJECTS IN THE BRAZOS RIVER BASIN; AND URGING THE U. S. CONGRESS TO APPROPRIATE THE FULL REQUESTS FOR SUCH PROJECTS; AND PROVIDING FOR RECORDATION AND DISTRIBUTION.

WHEREAS, the Energy and Water Development Subcommittees of the U. S. Senate and House Appropriations Committees are now considering appropriations for funding of various projects of the Corps of Engineers for Fiscal Year 1983, and

WHEREAS, all of the Corps of Engineers water resource projects in the Brazos River Basin and, in particular, the Lake Millican Project and the Brazos Natural Salt Pollution Control Project are of vital interest to the City of Freeport and its citizens, and

WHEREAS, water supplies for the Brazos River Authority's basin-wide system are in immediate need of the Lake Millican source, and

WHEREAS, flood control remains a continuing need in the Brazos Basin and the Lake Millican project is an integral part of the flood control plan and unimpeded progress on the project is an urgent need of the entire Basin, and

WHEREAS, the Brazos Natural Salt Pollution Control Project is necessary to improve the quality of water in the main stem of the Brazos River to allow use of such river water as a needed source of potable water for the various municipalities within the Brazos River Basin,

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FREEPORT, TEXAS:

THAT the City Council of the City of Freeport, Texas, supports the funding requests of the Corps of Engineers for water projects in the Brazos River Basin,

THAT the City Council of the City of Freeport, Texas, hereby urges the Energy and Water Development Subcommittees of the U. S. Senate and House Appropriations Committees, the U. S. Senate and House Appropria-

tions Committees, and the full U. S. Senate and House of Representatives to approve in full the funding requests for Brazos River Basin water projects,

THAT the original of this resolution, after execution and attestation, be maintained by the City Secretary in the permanent records for the City of Freeport, Texas, and that certified copies of the same be delivered by the City Secretary of the City of Freeport, Texas to the Honorable Tom Beville, Chairman, Subcommittee on Energy and Water Development, House Committee on Appropriations; the Honorable Mark O. Hatfield, Chairman, Subcommittee on Energy and Water Development, Senate Committee on Appropriations; and Carson H. Hoge, General Manager, Brazos River Authority, for their consideration.

PASSED AND ADOPTED, this 15th day of MARCH, 1982.

FREEPORT HARBOR, TEX.

PREPARED STATEMENT

Mr. CROW. The next witness is Mr. Marcus Weems, chairman of the Brazos River Harbor Navigation District. Is Mr. Weems present? [No response.]

We will include their full written statement in the record at this point.

[The statement follows:]

STATEMENT OF MARCUS WEEMS, CHAIRMAN, BRAZOS RIVER HARBOR NAVIGATION
DISTRICT

The Brazos River Harbor Navigation District, the local non-federal sponsor of the Freeport Harbor, Texas channel modification (45-foot project), now under consideration, respectfully urges that funds be appropriated for the commencement of this project in FY 1983.

The Reagan administration has introduced legislation in Congress that would eliminate federal financial support of deep water port development and maintenance. To balance the federal budget, this proposal would impose a system of user fees to recover federal costs for these projects. Several cost recovery proposals have been supported by various groups of ports, especially those large ports seeking to develop deep draft (55 foot) coal export facilities. Among the port industry, the main issue of contention concerns the kind of user fee to be imposed. Many large ports with high volumes of traffic want a locally set fee imposed on the trade at each port to pay for the improvements made at that port. Many other ports including Freeport favor uniform user fees to be collected at all ports.

Meanwhile, there have been no new Port starts since 1976 and the deadlock over user fees seems sure to continue. The Port of Freeport has been working diligently with the Reagan Administration to evolve an innovative financing strategy based on 50% Federal-50% Local resources because this project is critical to us and to the United States National Defense.

Funding for this project is urgent. Corps of Engineers personnel in Galveston have predicted the probability that the jetties will collapse in the event of a hurricane blocking the channel completely. This unfortunate circumstance would not only paralyze the local economy but immobilize three-fourths of the distribution capacity of the Strategic Petroleum Reserve facilities at Bryan Mound in Freeport.

IMMEDIATE ACTION IS NEEDED TO REDUCE SAFETY HAZARDS
CAUSED BY NARROW JETTIES CONSTRUCTED IN THE 1920's.

Constructed in the early years of this century, narrow jetties leading into Freeport Channel afford only a 200-foot authorized width at bottom depth. This narrow entrance, which has not been improved for over 60 years, restricts entry into the port to ships of a maximum length of 750 feet regardless of tonnage or depth. Freeport is the only oil importing port in Texas that suffers this severe limitation. Freeport is also the shallowest of the five major Texas ports (currently authorized to 36 feet). These limitations create multiple threats to safe navigation. In a one-year study of the situation, the Corps of Engineers reported that in 1976, 173 tankers and 23 cargo vessels, more than 35% of the total of shipments for the year, moved through the main channel loaded to depths greater than the designed safe operating depth. Due to the shallow depth and narrow width of the channel, these ships must operate and maneuver at dead slow speeds, this causes a loss of effective rudder control. Currently, deepwater traffic is limited to one-way passage, with no passing or meeting in channels inland from the jetties. These improvements are urgently needed to remedy these unsafe operating conditions in the Port of Freeport.

NAVIGATIONAL LIMITATIONS ADVERSELY AFFECT ECONOMIC
UTILIZATION OF FREEPORT HARBOR

In addition to improving safety, a wider, deeper channel will enhance the economic viability and competitive position of the port. Presently, many vessels cannot navigate the shallow 36-foot channel. Many others can only meet the draft requirements if they call on Freeport light-loaded as they traverse the Gulf Coast. This frequently requires out of sequence scheduling and increases the shipping costs in and out of Freeport. For crude shipments, roughly twice as many ships are needed to move a quantity of crude from a transshipment point in the Caribbean to Freeport as are required to move an equivalent amount to the Port of Houston. These safety and operational limitations not only inhibit the port from attracting new customers and expanding into new product markets, they also could force some present shippers to seek alternative ports for their incremental shipping requirements. The appropriation which we seek for the improvements will cure these defects. The Corps of Engineers has estimated that this project will save shippers over \$37,000,000 per year in shipping costs (in 1977 dollars). These economies are vital to the port's continued viability. Again, if the superport option is eliminated from the analysis, the cost savings in shipping each year is over \$80 million (1977 dollars).

FREEPORT HARBOR IMPROVEMENTS BENEFIT OFFER MULTIPLE NATIONAL
AND LOCAL BENEFITS. BENEFIT-TO-COST RATIO IS
ONE OF THE HIGHEST FOR ANY WATER PROJECT.

Mr. Chairman, and Members of the Subcommittee, I realize fully that you and the Congress as a whole are struggling mightily to balance the budget for FY 1983. In this era of austerity, each appropriation must be scrutinized and evaluated. I firmly believe this project passes all such tests and should be given high priority. The COE has calculated the benefit-to-cost ration of this project at 6.4:1. This is believed to be the highest ratio for any project undertaken by the Galveston District and ranks among the top half dozen for such projects nationwide. This calculation only includes the direct benefits from transportation savings and dredging maintenance reductions. It also is based on the assumption that the Seadock consortium itself is now defunct and its successor, The Texas Deepwater Port Authority (TDPA), is all but dormant. Without this assumption, Freeport's benefit-to-cost ration increases to over 10 to 1.

OTHER BENEFITS INCLUDE SAFE HARBOR FOR SHRIMPERS,
ENVIRONMENTAL SUITABILITY, AND LOCAL ECONOMIC DEVELOPMENT.

Beyond benefits included in the COE calculation, we believe there are other substantial advantages to this project:

- (a) Safe harbor facilities are necessary for the growing number of commercial and industrial users of the port, including a very sizable Gulf Coast shrimping fleet based in Freeport.
- (b) Environmental damage is minimized by using Freeport's unique geographical configuration. Since the port fronts directly on the coast,

delicate marine ecosystems found in bays and estuaries are not disturbed by ship traffic and the appurtenances of a port facility. This project has the active support of state and local environmentalists. The City of Surfside also will benefit from the beach restoration work that this project includes. Local environmentalists have strongly favored this enhancement activity.

THE NATIONAL SECURITY IS ALSO
SERVED BY THIS PROJECT.

The Department of Energy SPR Project at Bryan Mound is located approximately three miles from the Freeport Channel. One hundred (100) percent of the Bryan Mound petroleum reserves are arriving via the Freeport Channel. Thirty-six percent of the Nations SPR storage based on current allocation will be at Bryan Mound. Approximately eighty (80) percent of Bryan Mound SPR emergency distribution capability is dependent on the Freeport Channel. If the SPR program is a justifiable undertaking, it is justifiable by reason of its importance to National security. The placing of one hundred (100) percent of the financial burden for providing a safe channel for incoming and outgoing SPR shipments on local interests is indefensible. The Federal Government should, without doubt, bear its fair prorata share of the cost of channel improvement and maintenance that is attributable to the SPR program.

THE FREEPORT PROJECT CAN BE STARTED
WITH A USABLE INCREMENT.

The building of a new north jetty and the dismantling of the present north jetty would result in the accomplishment of a usable increment of the total project by: (a) the elimination of the probability of the jetty collapsing under hurricane tides that frequent the Gulf of Mexico; (b) the elimination of a navigation hazard that the jetty entrance poses for modern-day larger and longer vessels that cannot navigate the narrow channel entrance with a reasonable degree of safety, as was possible for the smaller vessels of past years; (c) the accomplishment of an indispensable prerequisite to the dredging of a wider, deeper, safer and more efficient channel.

CONCLUSION.

THE 45-FOOT PROJECT FOR FREEPORT HARBOR IS THE MOST EFFECTIVE PROJECTS PRESENTLY RECOMMENDED BY THE COE.

NAVIGATION EFFICIENCY AND SAFETY WILL BE GREATLY IMPROVED.

A NATIONALLY IMPORTANT ENERGY/CHEMICAL MANUFACTURING COMPLEX WILL BE ASSURED OF A CRITICAL TRANSPORTATION LINK.

THE LOCAL ECONOMY AND THE NATIONAL BALANCE OF PAYMENTS WILL BE STRENGTHENED SIGNIFICANTLY.

THE NATION'S EMERGENCY/DEFENSE PREPAREDNESS CAPABILITY WILL BE IMPROVED.

TIMELY COMPLETION OF THIS PROJECT IS NECESSARY TO CAPTURE THESE BENEFITS. FOR THESE REASONS, I RESPECTFULLY REQUEST THAT THE SUBCOMMITTEE APPROPRIATE FUNDS FOR THIS PROJECT IN FY 1983.

LETTER FROM MARCUS WEEMS, CHAIRMAN, BOARD OF NAVIGATION AND CANAL
COMMISSIONERS, BRAZOS RIVER HARBOR NAVIGATION DISTRICT

March 11, 1982

Honorable William R. Gianelli
Assistant Secretary for Civil Works
Department of the Army
The Pentagon
Washington, D. C. 20310

RE: FREEPORT HARBOR 45' CHANNEL IMPROVEMENT PROJECT

Dear Mr. Gianelli:

In response to your letter of January 4, 1982, and our subsequent conferences and communications in regard to methods of financing the subject project, the Board of Navigation and Canal Commissioners of Brazos River Harbor Navigation District (District) submits the following for your consideration:

FINANCIAL CAPABILITY

The District is presently a rather small operation. The gross revenues over the past five years, other than ad valorem tax revenues, have averaged \$638,173.00 per year. Although the District has a very sound ad valorem tax base, it operates under a statutory maximum tax rate of \$0.10 per \$100 of assessed valuation; therefore, its tax revenues have not been substantial. Approximately 97 percent of the tonnage arriving and departing the Port of Freeport annually arrives and departs from privately-owned facilities of industrial users.

In short, as we have previously advised you, the District does not have the capability to undertake the financing of the entire channel improvement project on a cost-sharing basis that would obligate the District to contribute more than fifteen (15) percent of the total cost. However, our conviction regarding the merits of our project, combined with our concern for the urgent need to remedy the present degenerated condition of the entrance jetties, and in view of the presently existing navigation hazard that would be eliminated by relocating the north jetty and thereby widening the channel entrance, we are determined to stretch our financial capabilities to the utmost to commence construction on this project in FY '82.

JETTY REPAIR DELAY

The Freeport Project was authorized by the 93rd Congress Second Session in 1970. Repair and rehabilitation of the Freeport jetties that would otherwise have been accomplished during the past 12 years, through congressional appropriations, have been deliberately neglected to avoid substantial expenditures on jetties that were to be redesigned and relocated in accomplishing the channel improvement project. Delay in rehabilitating the jetties was a prudent decision from an economy standpoint. However, that delay is now shifting an economic burden to the District that should have been assumed by the Federal Government. During the years that the Freeport Project has been on the drawing board, almost every other port on the Gulf Coast has had allocated and expended many millions of appropriated dollars on jetty maintenance and rehabilitation. Fair play would suggest that inasmuch as delay in the commencement of construction on the Freeport Project has been through no fault of the District, that the Federal Government should assume its long-delayed obligation to remedy the Freeport jetty problem.

USEABLE INCREMENT APPROACH

The building of a new north jetty and the dismantling of the present north jetty would result in the accomplishment of a useable increment of the total project by: (a) the elimination of the probability of the jetty collapsing under hurricane tides that frequent the Gulf of Mexico; (b) the elimination of a navigation hazard that the jetty entrance poses for modern-day larger and longer vessels that cannot navigate the narrow channel entrance with a reasonable degree of safety, as was possible for the smaller vessels of past years; (c) the accomplishment of an indispensable prerequisite to the dredging of a wider, deeper, safer and more efficient channel.

THE NATIONAL SECURITY ELEMENT

The Department of Energy SPR Project at Bryan Mound is located approximately three miles from the Freeport Channel. One hundred (100) percent of the Bryan Mound petroleum reserves are arriving via the Freeport Channel. Thirty-six percent of the Nations SPR

storage based on current allocation will be at Bryan Mound. Approximately eighty (80) percent of Bryan mound SPR emergency distribution capability is dependent on the Freeport Channel. If the SPR program is a justifiable undertaking, it is justifiable by reason of its importance to National security. The placing of one hundred (100) percent of the financial burden for providing a safe channel for incoming and outgoing SPR shipments on the local interest is indefensible. The Federal Government should, without doubt, bear its fair prorata share of the cost of channel improvement and maintenance that is attributable to the SPR program.

EQUITABLE COST SHARING

If it was presently the law of the land that all future channel improvement projects would be funded one hundred (100) percent by local interest, nevertheless by reason of (1) the long deferred jetty maintenance and rehabilitation and (2) the National security related use of the Freeport Channel for the Strategic Petroleum Reserve Program, Federal interest would be fully justified in contributing one-half of the cost of the entire Freeport Channel Improvement Project.

UNCERTAINTY AS TO MANNER OF FUTURE FUNDING

We are advised that differences of opinion exist between the administration and members of Congress as to the appropriate means of providing funding for construction cost of new-start port improvement projects. The future and scope of user fee legislation appear uncertain. The time lapse before new legislation is enacted providing future funding guidelines may be substantial. In the meantime all aspects of the Freeport Project emphasize the urgency of avoiding further loss of time in commencing construction.

RELOCATE THE NORTH JETTY AS A USEABLE INCREMENT OF THE TOTAL PROJECT, ON A COST-SHARING BASIS

In view of (a) the deteriorated condition of the jetties, (b) the safety hazard to navigation resulting from the present narrow jetty entrance, (c) the inescapable fact that the north jetty must be relocated before channel widening and deepening can be commenced, and (d) the uncertainty of the amount of time that will lapse before guidelines for future funding are in place, the District suggests that an agreement be formulated between the Secretary and the District providing for a FY '82 start on the relocation of the north jetty at Freeport in accordance with the proposal prepared by the Corps' Galveston District Office, designated "Alternate (a)

North Jetty Only", except that all cost be on a fifty (50) percent Federal - fifty (50) percent District cost-sharing basis in accordance with the chart of "Alternate (a) North Jetty Only" attached hereto; and provided further that (1) all sums provided by the District be credited against the Local Non-Federal Sponsor's share of the cost of the entire channel improvement project so that in event that future funding of the cost of channel improvements for the Nation's ports continues on the traditional Congressional appropriation basis, the completion of the Freeport Project will be funded on that basis, with the District being called upon to provide only the traditional Local Non-Federal Sponsor share of the entire cost.

CONDITIONS OF OFFER

The District's financial ability to participate in cost sharing of the north jetty relocation increment of the project on a 50/50 basis would be conditioned on the following:

- a). No part of past Federal appropriations through FY-1981, related to this project, will be reimbursed by the District.
- b). Inasmuch as no dredging activity resulting in the necessity for depositing dredged materials will occur from the north jetty relocation, the requirement for acquisition of 400 acres of mitigation land be deferred until the channel dredging phase of the project is commenced, and be re-examined prior to that time.
- c). The District will not be allowed any credit for dredged material disposal sites and levee cost in the north jetty relocation phase of the project, but will be allowed credit for the value of those items in the financing of the channel dredging phase of the project.
- d). The District will be allowed credit against its 50 percent of the cost of the north jetty relocation for all sums expended by the District in the acquisition of lands and right of way for the project.

COMPLETION OF ENTIRE 45 FOOT PROJECT

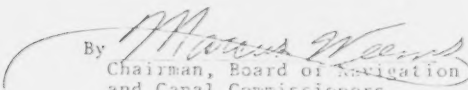
Should the north jetty construction be commenced in FY '82, the Galveston District's suggested construction timetable calls for channel dredging to be commenced in the second quarter of 1985. Hopefully, prior to that date the future of the method of funding improvements for the Nation's ports will have been determined, and the remainder of the Freeport Project would be completed under such plan as the administration, the Congress and the District may determine.

The District, with the assistance of major channel users, has the financial capability to contribute one-half (1/2) of the estimated \$26,193,000 cost of the 45 Foot Project - Alternate Plan (a) (North Jetty Only), as above outlined, and stands ready to formulate a final agreement providing for that work to commence in Fy '82.

Respectfully submitted,

Brazos River Harbor
Navigation District

By


Chairman, Board of Navigation
and Canal Commissioners

LETTER FROM WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY
(CIVIL WORKS)

19 MAR 1982

Mr. Marcus Weems
Chairman, Board of Navigation
and Canal Commissioners
Brazos River Harbor Navigation
District
P. O. Box 615
Freeport, Texas 77451

Dear Mr. Weems:

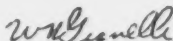
This is in response to your letter of March 11th, wherein your District offers to provide up-front financing of one-half the cost of a first phase of the authorized Freeport Harbor Project, which Phase would consist of relocation of the existing north jetty; the District proposes Federal financing of the remaining 50% of the cost on a non-reimbursable basis.

I consider your proposal to be a bona fide and serious effort to move this good project to early construction. The phased approach is certainly acceptable, and I acknowledge that there is merit in the various points you mention in support of your position.

I am sure you are aware, however, that the proposal falls considerably short of the financing offer we are making to the sponsors of all port projects ready for construction in Fiscal Year 1983, which proposal reflects the Administration position of 100% cost recovery for deep draft ports, and a financing arrangement of 25% Federal and 75% non-Federal. For this reason, I am not able to accept your offer. However, when we send our proposals for 1983 new starts of projects of the Corps of Engineers to OMB on April 1st, your proposal will be forwarded in the package for OMB's information, along with all other proposals that we are not able to accept at this time. Meanwhile, we will certainly keep the project alive and ready to go.

I very much appreciate your efforts and all your courtesies to me and to Bob Eiland.

Sincerely,



William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

HARRIS COUNTY, TEX., FLOOD CONTROL PROJECTS

Mr. CROW. We have also received a statement from Harris County Flood Control District of Texas which will be made part of the record at this time.

[The statement follows:]

STATEMENT OF JAMES B. GREEN, P.E., DIRECTOR, HARRIS COUNTY (TEX.) FLOOD
CONTROL DISTRICT

My name is James Green. I am a resident of Houston, Harris County, Texas. I am a registered professional engineer and urban planner. I serve Harris County as the Director of the Harris County Flood Control District and the south Texas region as Chairman of the Regional Flood Control Forum for the 13-county Houston-Galveston Area Council. In addition, I serve the State of Texas as a member of Governor William P. Clements' Flood Control Action Group.

The Harris County Flood Control District respectfully requests that this statement be included as a part of the Record of the Congressional Hearings on the U. S. Army Corps of Engineers' Budget Requests for Fiscal Year 1982. There are nine projects affecting Harris County and its three million inhabitants that are included in the proposed Corps Budget. These include:

PROJECT	TYPE	FY 1982	FY 1983
Buffalo Bayou	Operations & Maintenance	\$ 4,111,000	\$ 1,348,000
Buffalo Bayou	Surveys	800,000	900,000
Clear Creek	Engineering & Design	300,000	260,000
Galveston Bay	Survey	720,000	500,000
Houston Ship Channel	Operations & Maintenance	5,656,000	11,710,000
Little Cypress Creek	Survey	279,000	240,000
San Jacinto River	Survey	300,000	350,000
Upper White Oak Bayou	Survey	400,000	570,000
Vince & Little Vince Bayous	Operations & Maintenance	1,441,000	2,000,000
		<u>\$14,007,000</u>	<u>\$17,878,000</u>

A major portion (40 percent for FY 1982 and 65% for FY 1983) of this proposed budget is concerned with O&M cost for maintaining navigability of the Houston Ship Channel. While these efforts are critical in maintaining the economic vitality of the area, my testimony is directed to the other projects which are critical to our efforts in combating the rising losses from flooding in Harris County.

The Committee has only to check the Federal Flood Insurance program to see that significant amounts have been paid out in this area since the program's inception in the early 1970's. The devastating floods of 1979 illustrate the point. A study by the Rice Center estimated the total cost in flood damages of the 1979 storms in Harris County to be approximately 129 million dollars.

This cost estimate is based on damages actually reported and requested through Federal Insurance Administration, Small Business Administration, FmHA, Municipalities, Red Cross, etc. Uninsured and unreported damages would significantly increase this cost.

In 1981 Harris County again experienced serious and costly flooding county wide. Although no estimates have been made of the damages, it is felt that the damages would equal or exceed those experienced in 1979. Significant flooding was experienced along Clear Creek, Upper White Oak Bayou, Cypress Creek, Buffalo Bayou, Vince and Little Vince Bayous as well as a number of systems not encompassed by Corps projects.

In 1979 the voters of Harris County approved the sale of 75 million dollars in bonds to begin an aggressive program to attack the County's serious flooding problems. In February of 1982 the voters approved the sale of another 175 million dollars in bonds to continue these efforts. Funds are to be set aside from the sale of these bonds to cover the local interest share of the Upper White Oak Bayou project, the Little Vince Bayou project and the Clear Creek project.

I would like to take this opportunity to voice again the opposition of Harris County to the proposed modification of Barker and Addicks Reservoirs prior to completion of the much more pressing projects mentioned above. The serious flooding along White Oak Bayou could be significantly aggravated by the proposed Addicks Reservoir modification without completion of the Upper White Oak Bayou project. It is the recommendation of Harris County that the three to four million dollars proposed in the FY 1982 budget for Addicks Reservoir modification be used to accelerate the design of the Upper White Oak Bayou and Clear Creek projects so important to Harris County.

Harris County faces some substantial and relatively unique potential flooding problems. We are a major urban area located in a very flat part of the State of Texas which is exposed to the annual threat of major tropical storms. And, the weather experts tell us a major hurricane is long overdue for this area. As surely as it rains every year, we will continue to sustain significant damages until the projects mentioned above are completed.

It is therefore respectfully requested that these Corps of Engineers' projects be approved or modified in accordance with the above statement.

OPPOSITION TO VARIOUS TEXAS PROJECTS

Mr. CROW. Also statements from Mr. Coulter Hoppess and W. W. Humphries of the Navasota River Improvement Association in opposition to the Millican Lake project, and a statement from the Texas Committee on Natural Resources will be incorporated at this point.
[The statements follow:]

STATEMENT OF COULTER HOPPESS, PRESIDENT, NAVASOTA RIVER IMPROVEMENT ASSOCIATION

This statement is filed on behalf of the NAVASOTA RIVER IMPROVEMENT ASSOCIATION which represents a broad cross section of persons in the business, financial, farming and oil and gas economy of Robertson, Leon, Brazos, Madison and Grimes Counties, Texas.

The Navasota River Improvement Association is informed that the Corps of Engineers is requesting an appropriation of \$600,000.00 to continue advanced planning and design for a structure and reservoir on the Navasota River, Brazos River, Texas. This project is commonly referred to as "The Millican Dam, Brazos River, Texas." The Millican Dam Site was abandoned many years ago as being completely unfeasible.

The Navasota River Improvement Association opposes the present budget request for the following reasons:

1. The three (3) proposed locations being studied by the United States Corps of Engineers would flood from 35,000 to 45,000 acres of a developing, significant oil and gas field, which has now been in existence, and is expanding, for the past four (4) years.
2. The value of the surface of the land during the period 1958-1981 has been of such significance as to make the inundation of such land economically unfeasible.
3. We endorse the goals and determination of the present National Administration and the Office of Management and Budget to reduce Federal expenditures in order to reduce and control inflation and to eventually achieve a balanced budget.

COMMENTS ON POINT 1

The potential production of oil and gas from the area to be involved in any of the proposed reservoirs is now a proven fact. The damages to existing oil and gas resources, in place and not yet produced, far exceed any discernible value of impounded water. The disruption of services to more than 200 producing oil and gas wells would be disastrous.

COMMENTS ON POINT 2

In addition to the oil and gas wells in place, there has been as much as 100 miles of oil and gas gathering and transportation pipelines built and put into service by numerous oil and gas and pipeline companies. The investment in these facilities amounts to several million dollars. In addition, the successful completion and imminent operation of the Grimes County Electric Generating Plant which is being fired by lignite coming from the area that was to be inundated by one of the proposed locations has also caused the construction of at least four (4) major electric transmission lines. These lines are of major proportion and cross and crisscross the site of the three reservoirs being studied. The re-arrangement or replacement of these lines places a heavy cost burden on any proposed reservoir on the Navasota River.

Due to condemnation proceedings which have eventuated through the building of the pipelines and electric transmission lines, there has been substantial studies made by numerous highly qualified land appraisers and sworn testimony given in the hearings regarding the taking of these lands for public purposes. An examination of all the testimony of these appraisers, regardless of whether they were representing the public utilities companies or the landowners, reveals that the price of the surface of these lands at this

time amounts to \$1,500 per acre to \$2,500 per acre. We contend that the Corps of Engineers in their studies are failing to take into consideration the appraised values being placed upon these lands by competent, qualified appraisers who are not local in nature but are true professionals and who operate not only in Brazos and Grimes Counties, Texas, but also in Harris County, Dallas County and all of the major population areas of the State of Texas where most careful and competent appraisals are required. For the Corps of Engineers to use any figure less than \$2,000 per acre for the land to be acquired would, in our opinion, be unrealistic and misleading to the Congress.

COMMENTS ON POINT 3

The national economy is being impacted and distorted by projected estimated financial deficits being caused by excessive expenditures by the Federal establishment. The Congress of the United States of America and its various committees have peculiar authority and ability to correct this situation. We argue and insist that the appropriation of funds for an unneeded, submarginal, questionable reservoir such as those being studied by the Corps of Engineers on the Navasota River would be unwise, contrary to the best interest of the United States of America and all of its citizens at a time when prudent, fiscal responsibility is badly needed and required.

WE OPPOSE THE APPROPRIATION OR ANY PART THEREOF.

STATEMENT OF W. W. HUMPHRIES, SECRETARY-TREASURER, NAVASOTA RIVER IMPROVEMENT ASSOCIATION

I am W. W. Humphries of Route 3, Bryan, Texas. I am Secretary-Treasurer of the Navasota River Improvement Association. I am also a resident landowner in the area to be inundated by the proposed Millican Dam on the Navasota River. I have appeared before the Committees of Congress regularly and faithfully commencing in the year 1958 and appeared each year thereafter. In all of these appearances I have attempted to fairly and fully inform this Subcommittee of the existing facts surrounding the development of the Navasota River and its watershed.

In the Spring of 1975, I appeared before the Committees of Congress bringing information regarding the existence of lignite underlying the lands to be inundated by one of the reservoirs being studied. The Texas Municipal Power Agency is in the final stages of completing a lignite-fired electric generating plant identified as The Gibbons Creek Plant at Carlos, Texas, and this electric generating plant is scheduled to commence generating electricity and go "on stream" during the year 1982. The lignite mining area as well as the plant site itself would have been prevented and destroyed had the proposed reservoir been built or even committed in such a way as to prevent the orderly financing and construction of this very valuable and needed electric generating facility.

In 1977 and 1978, and on April 1, 1980, I advised this Subcommittee of the existence of large reserves of oil and gas in sands which lie at nine to twelve thousand feet (9,000/12,000) throughout most of the area being considered for reservoir purposes.

Since my appearance on April 1, 1980, there have been approximately 150 successful oil and gas wells drilled and brought into production in the area.

While it is true that oil and gas can be recovered from submerged lands, it must be recognized that the cost of such development is increasing to a point that these resources might not be available when they are so badly needed. The oil being produced in the area has a high paraffin content and servicing of the wells requires the use of a work-over rig. We are advised that servicing of these wells by barge, as is generally the practice, would not be possible if these lands are flooded.

Virtually all of the land involved is under oil and gas leases, and plans for development by major oil companies, such as Getty, Gulf and Amaco, are well-known.

The discovery of oil and gas and the construction of the electric generating plant has brought about intense activity in the construction of oil and gas transportation pipelines and electric power transmission lines that are crossing and crisscrossing the entire area presently under study for the location of a reservoir. Millions of dollars have been invested in these facilities.

During the last two (2) years, the County Judge of Brazos County, Tex., has seen fit to appoint me as a Commissioner of Condemnation in numerous cases of condemnation brought about by the inability of the oil and gas pipeline companies and the electric utility company to reach agreements with the landowners involved. These hearings are all rather formal in nature and each of the contesting parties, in almost all cases, employ competent professional appraisers to study the land being taken and the damages occasioned to such land. Most of the cases upon which I have served as a Commissioner have involved land that would be affected by the present sites and locations being investigated by the Corps of Engineers. From the sworn testimony of professional appraisers serving in these cases, we have learned that the present market value for these lands range from \$1,500 per acre to \$2,500 per acre. Consequently, awards amounting to this sum for the taking of a right-of-way have been in almost all instances paid in cash money to the landowners.

It is our opinion that the Corps of Engineers should use a figure of not less than \$2,000 per acre for land acquisition and that any figure less than that indicated would be totally unrealistic and inaccurate.

We urge this Committee to give the most serious consideration to the information which we bring you today.

STATEMENT OF EDWARD C. FRITZ, CHAIRMAN, TEXAS COMMITTEE ON NATURAL
RESOURCES

Please enter in the record our opposition to any further appropriations for the following Army Corps projects:

Big Sandy Lake
Trinity River
Cooper Lake and Channels, Texas

They are not needed, and are a waste of money.

Enclosed is a copy of There Is Adequate Water Available, pertaining to the Cooper Lake project. Please include it in the record.

THERE IS ADEQUATE WATER AVAILABLE

The injunction against the construction of Cooper Dam has not deprived the people of Cooper, Commerce, or anywhere else, of an adequate water supply, now or in the future.

There are adequate alternative sources of water for Cooper, Commerce, the Sulphur River Municipal Water District, the North Texas Municipal Water District, and everyone else seeking a Cooper Dam.

One such source is the City of Dallas. Dallas has a water surplus until at least 2040 A.D. It is obligated to share this surplus with other cities at a fair price.

The new Lake Fork Reservoir, west of Quitman, is only 49 miles from the Sulphur River MWD. It adds immensely to the water supply of the area. In July 1981, the City of Dallas agreed to buy 107 million gallons per day of Lake Fork water, approximating the 109 mgd which Cooper would have supplied.

The Sulphur River MWD and others overlooked an opportunity to bargain directly for that water before Dallas bought it. In fact, Lake Fork has a yield of 145 mgd, according to the Army Corps of Engineers.

Dallas previously had bought 102 mgd of Lake Palestine water not yet in use. Dallas will gain additional supply indirectly from Lakeview Dam, now under construction, and other sources.

The water supply of the region must be shared. No cities nor water districts should obtain a new reservoir merely in order to have one of their own. Excessive dam construction is unfair to the taxpayers who have to pay for it, including federal and local taxpayers who would have to pay for a Cooper dam.

A COOPER DAM WOULD NOT ASSURE GROWTH TO COOPER AND COMMERCE

Even if Cooper Dam were built, there is no assurance that towns like Cooper and Commerce would get any of the new industry which surplus water often attracts.

The North Texas Municipal Water District, the major contractor for Cooper Dam water, has been promoting industrial growth for the City of Plano, and has been promoting the dam to supply that industry. Indeed, Plano is a boom town, and growing faster than ever.

Fast growing Richardson is another participant in the NTMWD.

The City of Irving is the second largest contractor for Cooper water. It, too, is experiencing a history of rapid growth.

PHILLIPS COAL COMPANY IS NOT DEPENDENT ON A COOPER DAM

Phillips already owns an option to buy water from Lake Fork Reservoir. This option was obtained from Texas Utilities Generating Company. When the City of Dallas bought 107 mgd from TUGCO, it was agreed that Dallas would honor the option of Phillips, Tenneco, the holder of another option, retains the same privilege.

Even aside from the water availability, Phillips has not yet decided to build a gasification plant. If it decides against it, the region does not necessarily suffer. To supply its plant, Phillips would stripmine hundreds of acres of lignite, thus reducing the productivity of the soil for food crops and timber.

GROWTH IS NOT NECESSARILY BENEFICIAL

Any such new industry would require an influx of workers, requiring greater local government expenditure for law enforcement, waste disposal, education, health services, roads, other services, and government in general. In spite of such expenditures, crime would increase, and the people of the area would lose some of their open space and environmental quality.

OHIO RIVER NAVIGATION IMPROVEMENTS

STATEMENT OF WILLIAM J. HULL, CHAIRMAN, OHIO VALLEY IMPROVEMENT ASSOCIATION, LEGISLATIVE COMMITTEE

ACCOMPANIED BY:

C. WILLIAM KINZELER, PRESIDENT, OHIO VALLEY IMPROVEMENT ASSOCIATION

RALPH A. NICHOLAS, JR., PRESIDENT, FREEPORT TERMINALS, INC.

RICHARD NISSLEY, VICE PRESIDENT AND GENERAL MANAGER, MON RIVER TOWING CO.

WILLIAM MORRELLI, THE OHIO RIVER CO.

Mr. CROW. The next witness then is Mr. William Hull, chairman, legislative committee, Ohio Valley Improvement Association.

Mr. HULL. Mr. Chairman, I have with me Mr. William Kinzeler who is president of the Ohio Valley Improvement Association. Let the record show that he is appearing here today as well.

We have, then, additional witnesses who will present brief statements: Mr. Ralph A. Nicholas, president of Freeport Terminals, Inc. on the Allegheny River; Mr. Richard Nissley, vice president and general manager of the Mon River Towing Co.; and Mr. William Morrelli of the Ohio River Co. in Cincinnati.

Mr. James Farley of the Waterways Association of Paducah and his associates had to leave. I would like to present their statement for the record, if I may. I will hand it to the young lady when we conclude.

Our statement, Mr. Chairman, has been filed for the record. It is quite detailed and lists the projects that we hope to have funded in fiscal year 1983.

They include the whole spectrum of water resources projects for the Ohio River basin. We believe that as a comprehensive program, that order, it deserves and has always received from this committee very fine consideration in most of our efforts.

GALLIPOLIS LOCK AND DAM

I do want to highlight our concern about the Gallipolis locks and dam appropriation. In fiscal year 1982, this committee and its companion committee on the House side very considerably provided \$1.6 million to continue planning and engineering for the project. This year, the Corps' capability and the budgeted amount for the same purposes is \$1.4 million. We are especially interested that that be appropriated.

As I understand, this is the last appropriation for which the project will be eligible under the authorization of phase I.

If it is appropriated, the project would then be eligible, subject to authorization for construction, which we are diligently striving for, would be eligible for its first construction funds in fiscal year 1984.

IMPACT OF PROJECT DELAY

The earliest practical date we estimate for the completion of that project is 1989 or 1990. By that time, 1990, the Corps' estimates, based on some independent studies they had made by expert consultants, the traffic delays will average 32 hours per tow transit. That will represent a cost—a waste, really—to the economy of something on the order of \$121 million in 1981 dollars with a 6-percent inflation rate. That is over \$200 million attributable to that kind of economic waste by 1990.

So it is essential, obviously, that the project be studied, which began in 1962; it was first approved in 1965. It has gone up and down and around the wheel 40 times as changing rules became applicable, that that project be authorized for construction and be funded for construction just as rapidly as it becomes eligible.

With that, I would like, now, to call on Mr. Ralph A. Nicholas, the president of Freeport Terminals.

ALLEGHENY RIVER OPERATION AND MAINTENANCE FUNDING

Mr. NICHOLAS. Thank you, Bill. I don't know that I need that, but I will use it anyway.

Mr. Chairman, I thank you for this opportunity to present not only my company's views, but the views of many hundreds and hundreds of other western Pennsylvania businesses. We will all be adversely affected through the Office of Management and Budget's proposed \$150 million reduction and the U.S. Corps of Engineers fiscal year 1983 operation and maintenance budget if it receives congressional approval.

My name is Ralph A. Nicholas, Jr. I am president of Freeport Terminals, Inc., a river terminal located on the Allegheny River 30 miles upstream from where the confluence of the Allegheny and Monongahela Rivers at Pittsburgh form the Ohio.

Should the Corps' O. & M. budget be cut, the eight locks and dams on the Allegheny River will be abandoned by the Corps and, consequently, the remaining three generations of our four-generation, family-owned business will be bankrupt.

I might add, parenthetically, that the owners of this business are my 85-year-old father, myself, two of my sons-in-law, two of my sons, and a daughter-in-law.

Freeport Terminals typifies a multitude of water-dependent businesses which would fold should the river be closed.

An obvious question arises: How could it come to pass that rivers throughout the country such as the Allegheny, most of which were developed by the Federal Government over a half century ago to open the heartland of the United States to commercial navigation, be summarily closed before a thorough determination is made as to the socio-economic benefits generated by these rivers in comparison to the cost of operation and maintenance of these rivers' lock and dam structures?

Let us consider the following: One, the Federal budget deficit for fiscal year 1983 will probably run from \$90 to \$120 billion. Two, in light of our Nation's economic ills, the present administration has proposed measures which hopefully will reduce our Federal deficit. Three, to date, the administration remains adamant with its pay-as-you-go concept of user fees paid by those who commercially ply our waterways. A user fee is merely a Madison Avenue euphemism for more taxation and, in this instance, discriminatory taxation. Four, the user fee concept, a pronounced deviation from our Nation's past economic policy, warrants in-depth analysis beyond that considered in the section 205 study. Five, the principle of user fees as proposed has not received true congressional support because of such unanswered questions as equitable allocation of costs among all beneficiaries and the catastrophic economic impacts regionally of such user fees. Six, increased user fee legislation was congressionally stalled in fiscal year 1982 for two reasons: the general lack of support of the user fee philosophy coupled with a lack of any specific equitable means of increased user fee collection. Seven, OMB's proposed \$150 million cut in the Corps' fiscal year 1983 O&M budget should not be used to bludgeon through the user fee issue.

Based upon these seven statements, let us take another look at the Allegheny River. By sheer coincidence, the Corps of Engineers began a benefit-cost analysis on the Allegheny River in September 1981. One of only three such studies of so-called low-use segments of the several river segments proposed for closure, preliminary findings indicate that the Allegheny River currently generates in excess of Corps' expenditures, the ratio being 3 to 1.

Projected commercial tonnages increases through year 2030 show a 56-percent increase for the lower portion of the river system.

The 6.5 million tons of average annual commerce moved on the Allegheny will be lost and unemployment in western Pennsylvania will soar. Billions of tons of coal for both domestic use and export now in place in counties flanking the Allegheny will remain untapped due to higher end costs to consumers.

Allegheny County has a greater pleasure boat registration than any other county in these United States. Many boat marines which currently generate both economic and social benefits to western Pennsylvania will be no more.

Mr. Chairman and members of the committee, until these serious national economic considerations are properly and thoroughly addressed, I ask that the \$150 million reduction in the Corps of Engineers' operation

and maintenance budget be reintroduced and approved as part of the fiscal year 1983 civil works budget request.

I thank you very much.

Mr. CROW. Thank you very much for your testimony. As you know from our discussion, your concerns are shared by many members of the subcommittee with respect to the reductions in the Corps' O&M request. The committee will be giving that very careful consideration when it comes time to address the Corps' budget.

Thank you very much for your testimony.

Mr. HULL. The next witness, Mr. Chairman, is Mr. Richard Nissley, vice president and general manager of Mon River Towing.

Mr. NISSLEY. Thank you.

Gentlemen, I appreciate the opportunity to address this distinguished body. I am Richard Nissley, vice president and general manager of Mon River Towing, Inc., of Belle Vernon, Pa.

We have heard in the hearings lengthy and studious testimony from trade associations and large companies concerning the effect on the inland waterway industry of the proposed fiscal year 1983 budget. I would like to take just a minute and tell you briefly what would happen to one small company if these changes in the Corps of Engineer's operations were put into effect.

Mon River Towing is a small, family-owned barge line that started in business some 20 years ago with one boat and one barge. Today, we operate 10 boats and about 300 barges. Our business is about 85 percent coal. We move 6 million tons of coal each year. Also, in petroleum products, we move about 4½ million barrels of petroleum in the Pittsburgh area.

We operate exclusively in the local Pittsburgh area, so any reduction in service on the part of the Corps of Engineers on the three rivers—the Mon, Allegheny, and Ohio—would have an immediate and significant impact on our economic well-being.

Very briefly put, the proposals which you are now considering would have but one effect: It would put us out of business and send some 200 people to the unemployment office.

We have been told that the Corps of Engineers, to implement their plans, would have to close the Allegheny River. Traffic on that river accounts for some 25 percent of my income. We move well over one-half million tons of coal to the Duquesne Light Co. power station at Cheswick, Pa., and return with a similar amount of coal destined for another power station on the Monongahela River. The loss of that amount of business would put us below the break-even point.

It has also been proposed that the operating time on the locks on the Monongahela River be reduced. The greatly increased delays resulting from curtailed lock operation would make our rates noncompetitive for the petroleum products that we move on that river from Pittsburgh to Morgantown, W. Va. The alternative would be truck transportation. The increased highway traffic between Pittsburgh and Morgantown would be nearly 100 tank trucks each and every day to offset the loss of barge traffic.

Similar examples can be cited for the 30 million tons of coal that move on the Monongahela River, which is about 25 percent of all the coal mined in the State of Pennsylvania. There are no adequate alternate means of transportation available to do this.

The river business is a classic example of the innovative and imaginative type of enterprise that developed the competitive spirit which is the foundation of this country. Anyone who has the money and the initiative can buy a boat and go into business on the river. The ones who survive are those who do the best job for the least cost. We would like the opportunity to continue to provide this service to our customers.

Thank you.

Mr. CROW. Thank you very much.

Mr. HULL. The next witness, Mr. Chairman, is Mr. William Morelli of the Ohio River Co.

GALLIPOLIS LOCK AND DAM

Mr. MORELLI. Thank you. My name is William Morelli, staff counsel and director of government affairs for the Ohio River Co. in Cincinnati, Ohio.

The Ohio River Co. is one of a family of companies which provides barge transportation, barge construction and repair, terminaling, and support services throughout the inland waterway system. Our Midland fleet carries almost 40 million tons and generates 20 billion ton-miles per year, making it one of the largest fully-integrated water transportation companies in the country.

ECONOMIC IMPACT OF PROJECT DELAY

I am here today to discuss the impact that the delays at the Gallipolis locks and dam on the Ohio have on our company as representative of one of the larger companies in the industry.

For the sake of brevity, I would like to just merely outline some of the effects these have on our company.

During 1981, the Ohio River Co. moved almost 8 million tons of bulk goods through the Gallipolis locks and dam. This was roughly 18 percent of the total tonnage moved through that structure in 1981. We experienced 114 upbound delays, averaging 5.9 hours per delay, 672.6 hours total, and 120 downbound delays, averaging 5½ hours per delay, or approximately 650 hours total, for a grand total of 1,320 hours.

That translates into 55 operating days for our company. At a total delay cost of \$253 per hour, the Ohio River Co. incurred \$334,000 in delays due to waiting time on the Gallipolis. One of the real shames of these delays is the energy wasted while waiting to go through.

Almost \$150,000 and 160,000 gallons of diesel fuel were wasted by our company because of the congestion at the Gallipolis locks and dam. This amount, \$334,000, would increase by about 19.5 percent had it not been for the 70-day coal strike during 1981. That would have brought the total delay costs to around \$400,000.

It must also be remembered that these costs were incurred by only one company. In order to get a more accurate picture of the total cost

of delays at Gallipolis, one could take the delay cost incurred by our company and extrapolate that to the remaining 82 percent of the tonnage moving through the locks in 1981. It is not difficult to see that the total industry delay costs were significant.

Also, with projected traffic growth on the Ohio, the delay costs at the existing structure will increase as traffic increases, causing further economic disruption. These costs can be avoided with a new structure at Gallipolis.

Thank you for letting me present this testimony.

Mr. HULL. We appreciate this opportunity to testify. We sympathize very much with the problems of the subcommittee has had this afternoon. We are glad for this opportunity.

Thank you.

Mr. CROW. We, again, regret the unavoidable delay. We appreciate very much your appearing before the subcommittee.

Let me assure you that the chairman of the subcommittee, Senator Hatfield, and the other members of the subcommittee share your concerns over these matters, particularly with proposed reductions in the O&M account and the problem at Gallipolis. Your statements will be helpful to us. We appreciate your appearing today.

Mr. HULL. Thank you.

Mr. MORELLI. Thank you.

[The statements follow:]

STATEMENT OF WILLIAM J. HULL, CHAIRMAN, LEGISLATIVE COMMITTEE, OHIO VALLEY
IMPROVEMENT ASSOCIATION, INC.

The Ohio Valley Improvement Association, a broadly-based civic organization headquartered in Cincinnati, Ohio, and dedicated to the more effective use and development of the water resources of the Ohio River Basin, presents herewith its recommendations to the Office of Management and Budget for the fiscal year 1983.¹ Pursuant to the policy which this Association has maintained since its founding in 1895, these recommendations are confined to projects of proven engineering, economic, and environmental feasibility.

I. IMPORTANCE OF THE WATER RESOURCES PROGRAM OF THE OHIO BASIN

The Ohio Basin extends from the vicinity of Johnstown, Pennsylvania, on the east, westward to the Mississippi River, and from northern Ohio and Indiana southerly into the State of Alabama. The Basin includes portions of 14 states and has a population of about 26,000,000 persons. The importance of the Basin's water resources is signified by the fact that the annual runoff per square mile is close to twice the national average.

The Basin encompasses a mature and diversified industrial and farm economy, including the steel industry of the Pittsburgh, Youngstown, Wheeling, and Cincinnati districts, the large chemical complex of the Kanawha and Upper Ohio Valleys, substantial petroleum refining and distribution facilities, most of the nation's production of bituminous coal, a major portion of the country's electric utility system, principally investor-owned, and extensive and highly productive farming areas. All of the eastern basin lies in the Appalachian area.

Flood control, water supply, and navigation are continuing and vital factors in the economic life of this region. The biennial investment survey which our Association conducts has determined that since 1950, over \$63.6 billion has been invested in major plant projects in counties bordering the Ohio River and its navigable tributaries. Abundant supplies of process water, flood control of sites suitable for plant construction in otherwise mountainous territory, and low-cost water transportation are the reasons most commonly

¹Except as otherwise noted.

advanced by industrial executives for the Ohio Valley site selections. The critical importance of water transportation in this development is demonstrated by the fact that traffic volume on the main stem of the Ohio has risen from about 73 million tons and 16 billion ton-miles in 1958, to more than 165 million tons and over 43 billion ton-miles in 1979. In combination with the rich natural resources and high quality of the labor force, comprehensive water resource development and wise use are thus crucial to the major role of this extensive region in sustained high employment, containment of inflation, secure energy supply, and growth of the national economy.

The projects we recommend for Fiscal 1983 are listed in detail on pages 23 to 25 of this message, falling into the categories of navigation, flood control, local protection projects, and water resources surveys. It must be emphasized, however, that these are convenience classifications only. The recommended projects are largely multiple purpose, each typically performing more than one of the functions named and, in addition, contributing to others, including water supply and water-based recreation.

II. NAVIGATION

The Gallipolis, Ohio Locks-and-Dam Modification Project

The most immediately and seriously critical navigation project on the main stream of the Ohio River is that at Gallipolis, Ohio. The present lock-and-dam structure at this site, completed in 1937, is deteriorated, dangerous operationally, and seriously inadequate for modern navigation technology and traffic demand. Congestion at Gallipolis is already serious and steadily getting worse. With the attainment of operational status of the Smithland project on the lower Ohio River in 1981, the existing main lock at Gallipolis is the only main lock chamber with a 600-foot limitation between the Pennsylvania border and the Gulf of Mexico, a river distance exceeding 2,000 miles.

The Upper Ohio Basin. Until improved, the antiquated Gallipolis installation will stand as the sole bottleneck to carriage of essential fuels and commodities between the Upper Ohio Basin and the entire continental interior and the Gulf Coast. The Upper Ohio Basin encompasses eastern Ohio, western Pennsylvania, and most of the State of West Virginia. It includes not only the Pittsburgh area but, in addition, the entire valley of the Kanawha River, plus Youngstown, Parkersburg.

Wheeling areas. Major industries throughout this region are critically dependent on expeditious transits via Gallipolis.

The Board of Engineers for Rivers and Harbors has reviewed and approved a report by the Huntington District Corps of Engineers that evaluated present waterway system transportation losses and recommends immediate improvement at Gallipolis. Addition of double locks, with 110-foot by 600-foot and 1200-foot locks in a bypass canal, and rehabilitation of the dam, would greatly improve the waterway system efficiency by reducing delays and saving transportation costs over alternative modes, eliminate the safety hazard, and assure the continued waterway transportation service required by the Upper Ohio Basin.

The February 1981 Gallipolis Locks and Dam Replacement Report shows direct 1990 transportation savings that would exceed \$74 million, in 1979 dollars. The average annual benefits of \$111.1 million, when compared to \$9.4 million of incremental annual charges, make the project B/C ration equal 12.9 to 1. This is evidence of a substantial regional and national productivity loss that will continue until larger locks are available at Gallipolis.

Fuels and Commodities Affected. The Gallipolis site is particularly critical as a gateway of energy supply into the Upper Ohio Basin and has an important bearing on the reliability of electric power throughout a wide area. Over 52 percent of all the tonnage moved through the Gallipolis locks in 1978 consisted of bituminous coal, and an additional 16.1 percent of petroleum fuels, principally gasoline and fuel oil. Gallipolis is also vital to the chemical industry of the Upper Ohio and Kanawha River Valleys and constitutes, as well, an important outlet to distant markets for high-valued steel products from the Pittsburgh and Upper Ohio Basin districts. In addition, the facility transits very large tonnages of ores, aggregates, and other minerals.

The following table sets forth the tonnages of major commodity movements through the Gallipolis locks in 1978:

TABLE I.

MAJOR COMMODITY MOVEMENTS TRANSITING THE GALLIPOLIS LOCKS -- 1978

	Millions of Tons		
	Upbound	Downbound	Totals
Coal and Coke-----	15.0	5.9	20.9
Petroleum-----	6.2	0.2	6.4
Aggregates-----	1.9	0.3	2.2
Chemicals-----	2.5	0.6	3.1
Ores and Minerals-----	1.1	0.4	1.5
Iron, Steel, Scrap & Iron Ore	1.4	1.7	3.1
All Other Commodities-----	1.8	0.8	2.6
TOTALS -----	29.9	9.9	39.8

Source: U.S. Dept. of the Army, Corps of Engineers, Ohio River Division.

Bituminous Coal. The role of the Gallipolis Locks in the transit of bituminous coal deserves special emphasis in view of the program for greatly expanded utilization of this fuel in the Nation's energy supply. Coal transits at Gallipolis have risen from 12.5 million tons in 1972 to 20.9 million in 1978. An even more rapid growth is now projected for the 1980's. The Huntington District February 1981 report on Gallipolis, projects coal transits of 36 million tons at Gallipolis in 1990.

The unobstructed upbound movement of metallurgical coal is essential to the extensive steel industry of the Pittsburgh, Wheeling, and Steubenville districts. No adequate alternative sources of the required grades are economically available. Much the greater portion of the coal transits, however, consists of steam coal, some for the steel and chemical industries, but most of it, both upbound and downbound, for riverbank electric generating stations. Any avoidable delay in completion of the projected modification would very probably cause a corresponding delay in the programmed expansion of coal-fired generating capacity in the Upper and Central Ohio Valley during the remainder of the century.

Petroleum Products. The upbound movement of petroleum products is of strategic importance to the U.S. balance of payments and to the long-established distribution system of the interior refining industry. In the Upper Ohio Basin, the waterborne products from Gulf Coast and interior refineries are in direct competition with products available from Atlantic Coast origins by other modes, a source in which imports of crude oil and petroleum products play a substantially larger role.

Gasoline and fuel oil comprise the largest volumes. In 1978, the gasoline movement through Gallipolis amounted to 603.8 million gallons, an amount equivalent to over 67 percent of all the gasoline received by all modes of transportation in the entire State of West Virginia. These receipts, however, were not confined to West Virginia, a large portion having been delivered into Eastern Ohio and Western Pennsylvania. Additional petroleum products moved upbound via Gallipolis include fuel oils, naphtha, jet fuel, and lubricants--all of importance in this highly industrialized part of the country.

Chemicals. The chemicals movement likewise represents a long-established logistical system. Crude chemicals and intermediates originating on the Gulf Coast and the continental interior are carried to the processing plants of the Kanawha and Upper Ohio Valleys for the production of an immense variety of finished products for subsequent distribution by rail and truck to industries and consuming markets throughout the Northeast Quadrant of the United States. The industry also ships a substantial volume of these products by water downstream via the Gallipolis locks.

Iron and Steel. The downbound steel movement in 1978 represented an f.o.b. revenue to the Upper Ohio Valley industry of about \$610 million, a large portion consisting of deliveries to the Lower Mississippi Valley and the Gulf Coast in competition with steel imports. Congestion at Gallipolis impairs economical access to these markets, contributing to a regional surplus with a depressive impact on all the mills of the area, including those of the troubled Youngstown district.

Economic Impact of Deferral of Recommended FY 1983 Funding.

In view of the involvement of these vital regional and national interests, it is most important that there be no avoidable delay in advancing the necessary engineering and design work and initiating construction of the Gallipolis modification project. The Huntington District of the Corps reports that, with the most expeditious progress, completion cannot possibly be expected before the end of 1988. Based upon past experience, however, completion late in 1989 appears to be a much more realistic expectation of earliest possible completion.

Therefore, a decision at this time on the funding of AE&D for Fiscal 1983 will determine whether the project is to be completed

as soon as possible, under orderly and expeditious procedures, or one year later than possible. Therefore, the following analysis relates to the costs of congestion of Gallipolis during that one year of possible initial service of the projected new lock, using the year 1990 as a benchmark.

During the year 1990, the non-availability of the projected 1200-foot lock would be immensely costly to the shipping and receiving industries. In our message for Fiscal 1982, prepared last year, we presented an estimate of this cost at \$133 million in 1979 dollars, or, in 1990 dollars, in the range of \$238 million to \$315 million, depending on the rate of inflation. This estimate had been developed by our consulting economist, Marvin J. Barloon, Professor of Economics (Emeritus) of Case Western Reserve University.

Subsequent official reports permit a refinement of this figure. On the basis of these reports, Professor Barloon now estimates a 1990 cost well in excess of \$121 million, stated in 1981 dollars. At an inflation rate of 6 percent per year, this would amount in 1990 to \$204 million dollars and, at a 9 percent inflation rate, to \$262 million. These are the only estimates which can reasonably be developed on hard data and are substantially less than the actual minimum.

Last year's estimate was based on a projected traffic demand at Gallipolis in 1990 of 70.9 million tons. This was the projection reported by the CONSAD Research Corporation of Pittsburgh, under contract with the Army Corps of Engineers, and confirmed by corresponding projection also independently prepared for the Corps by the Battelle Columbus Laboratories of 70.2 million tons.

Subsequently, in December 1980, Robert R. Nathan Associates, Inc., presented to the Corps a third projection of 1990 tonnage via Gallipolis, this time of only 64.5 million tons. In the interest of conservatism, we are using the lowest of these 3, namely, the 64.5 million-ton Nathan projection.

A second official report contributing to refinement is that of the Huntington District of the Army Corps of Engineers on the Gallipolis project, issued in February, 1981. This report makes clear that the present Gallipolis locks cannot accommodate even the lower traffic demand projected by the Nathan report, and that the actual maximum tonnage which can transit the locks economically

in 1990 is 49.5 million. The remaining 15.0 million tons will be unable to sustain the costs of congestion and will be driven off the river, at the cost of serious industrial maladjustments. The Huntington District report further projects average waiting time per tow transit at the present Gallipolis lock in 1990 at 32.0 hours. These estimates were derived by the Corps from extensive in-depth simulation analysis of lock capacities, traffic configuration, and waiting times at congested locks from long-term past experience.

Lost time waiting for lock access incurs costs both in the carriage function and in shipping and receiving activities. A number of carriers have reported 1981 carriage costs, alone, of approximately \$400 per tow-hour of delay. The additional costs in shipping and receiving activities consists of increased inventory charges consequent on longer times in transit and of costs of unpredictability of arrival times, such as shut-downs of production lines, delayed deliveries to customers, overtime labor charges, and the like. No current estimates are available as to these shipper and receiver costs.

Our present estimates of costs of congestion at Gallipolis in 1990, therefore are limited to the lowest projection of traffic demand and exclude costs to shipping and receiving activities. On these severely limiting assumptions, we estimate the costs in 1990 of non-availability of the projected new lock at Gallipolis as something well in excess of \$121 million, stated in dollars of 1981 purchasing power, not far from Professor Barloon's estimate last year.

At \$400 per hour, the time lost of 32.0 hours would represent a cost per tow transit in 1990 of \$12,800, or an average of \$2.12 per ton of freight carried. This would affect the projected 49.5 million tons transited. As for the 15.0 million additional tons driven from the river, this tonnage would consist of traffic which could not bare the \$2.12 congestion cost. Some of this lost tonnage would reflect shut-downs of commercial and manufacturing operations; some would reflect a shift from production in the Ohio Basin to other regions of the country; some would reflect abandonment of selected markets to foreign competition; and some would reflect a diversion to pipe lines, railroads, and trucking, the last usually representing shorter hauls. While the cost of this tonnage loss cannot be estimated,

it would clearly be less than \$2.12 per ton, having been selected by shippers and receivers as an alternative preferable to the \$2.12 per ton congestion cost. On the 15.0 million tons so affected, we have assumed a cost of only 50 percent, or \$1.06 per ton.

Our resulting estimate of the cost in 1990 of non-availability of the projected new lock, therefore, consists of approximately \$105 million in costs of congestion for the surviving traffic and of \$16 million in costs consequent on the shift in traffic from the river for a total of \$121 million. This is based on the lowest of the three traffic projections and leaves completely out of account the costs of congestion to shipping and receiving activities. It is therefore less than the foreseeable minimum. Furthermore, in view of the almost inevitable slippages to be expected during construction, the estimate is highly optimistic in assuming a possible completion date late in 1989.

For these reasons, it must be emphasized that the urgency of funding of the Gallipolis project for Fiscal 1983 cannot be judged in terms either of the present situation at these locks or the outlook during the next two or three years. Because of the long lead time for design work and construction, any action taken today will exert its full impact some eight or nine years from now. A single year of deferral at this time will impose a cost estimate partially at \$121 million, and more probably close to something like \$150 million in the year 1990 with seriously adverse effects on industrial investment, employment, and the contribution to the U.S. balance of payments in the affected regions. In comparison with the total construction cost, estimated at about \$258 million, the delay of only one year would thus sacrifice something like one-half of the total federal outlay for the project with no off-setting benefit to the American economy.

Operational Hazards. In addition to the costs of congestion, relief is badly needed for the hazardous conditions of approach to the present locks. At medium-high and high water stages, when the current is swift, the risk of serious accident is unacceptably high, and rising traffic demand associated with congestion will substantially raise the exposure to this risk. In a recent year, the Huntington District of the Corps of Engineers found that the accident rate

at Gallipolis was six times as high as that at any of the modernized facilities on the Ohio. The additional lock installation now proposed would substantially eliminate this hazardous condition.

Favorable Economic Evaluation. In spite of the clear need for action at Gallipolis, progress has been repeatedly deferred over a long period. Anticipating the problems of deterioration and congestion, studies were begun by the Huntington, West Virginia District of the Army Corps of Engineers fifteen years ago. Favorable evaluations have been repeatedly reported, the latest in February, 1981 with a ratio of benefits to cost of 12.9 to 1.0. All the studies reinforced the previous findings as to economic feasibility and as to the rapidly increasing economic losses from failure to proceed expeditiously with the improvement.

Therefore, this Association recommends that funds be budgeted in the FY 1983 budget for continued planning and engineering on the Gallipolis project at the full capability of the Army Corps of Engineers. We cannot overemphasize the enormous regional values at stake in this project with their implications as to national objectives and policy.

System Analysis. In association with the foregoing recommendation, the ongoing systems analysis and other studies leading towards authorization and construction of replacement works for the existing lock-and-dam installations of Dashields, Emsworth, and Montgomery Island near the source of the Ohio River at Pittsburgh, should move forward to completion at the earliest practicable date, together with the necessary rehabilitation work at Emsworth.

Other Ohio River Navigation Projects. We also recommend provision of funds in Fiscal 1983 for continued progress on the main steam navigation project at Smithland, Kentucky. This project is operational but additional funding is required to develop its full recreational potential.

In addition, the deteriorated 600-foot lock at Locks and Dams Nos. 52 and 53, in the busiest reach of the Ohio River, require prompt rehabilitation, and studies looking towards permanent solution of the emerging problems of the existing temporary locks should be expedited.

Ohio River Tributaries and Connecting Waters.

Monongahela River. We urge most strongly that funds be budgeted, subject to authorization, in the regular FY 1983 budget to initiate and continue advanced engineering and design on the Point Marion and Grays Landing projects. The facilities will replace existing Locks Nos. 7 and 8, which will have been in service well in excess of 50 years before new installations can be completed. In addition to the risk of failure, the antiquated design and dimensions of the old facilities constitute a serious bottleneck to coal and other traffic of great importance to the economy of West Virginia and the Pittsburgh industrial district. The plan and profile of the Monongahela River navigation system appears herewith as Chart 3.

The navigation structures in the Lower Monongahela River are also gravely inadequate and obsolete. Replacement projects should be authorized and funded by the Congress as soon as possible.

Kanawha River. Early completion of the ongoing survey is urgently required to develop an optimum plan for modernization of existing structures nearing the end of their useful life and rapidly approaching capacity limits.

Lower Cumberland River. A study is in progress to determine means for improving navigation conditions in the reach of the river below Barkley Dam. Existing conditions restrict utilization of the waterway and prevent realization of the full benefits of the Barkley Locks. It is essential that this study be completed as soon as possible in order that necessary improvements may be made. The plan and profile of the Cumberland River navigation system appears herewith as Chart 2.

Tennessee-Tombigbee Waterway. As an important linkage between the Ohio River waterway system and the eastern Gulf Coast, this Association endorses the provision of funds to continue construction of the Tennessee-Tombigbee Waterway. This project will close the gap between the Tennessee River, a major navigable tributary of the Ohio, and the Gulf of Mexico at Mobile, Alabama, thus greatly enhancing the usefulness of the inland waterway system with benefits to commerce and industry and economic development throughout the interior of the Nation.

The Tennessee-Tombigbee connection is of special importance because of the growing potential for the movement of Ohio Basin coal to eastern Gulf Coast electric utilities. Not only will this connection reduce costs by eliminating several hundred miles of distance; in addition, it will circumvent the present serious bottleneck between the Mississippi River and the Eastern Gulf Intra-coastal Waterway in the New Orleans area and enhance the national program for increased utilization of domestic coal.

III. FLOOD CONTROL AND MULTIPLE PURPOSE PROJECTS

Flood control has reduced the tragic consequences of flood disasters, while encouraging new plant construction and community development at sites previously exposed. Over the life of existing works, as of September 30, 1980, a total of \$7.1 billion in property damages have been prevented by projects costing approximately \$2.5 billion. Thus the total damages prevented by existing works amounted to more than double their original cost, an impressive return on public investments in projects whose life to date averages only 20 years, with many years of service life remaining. Table II, page 19, sets forth annual and cumulative damages averted in the Ohio River Basin by Corps of Engineers projects, 1970-1980.

The costs of flood disasters, over and above destruction of property, include prolonged interruption of production and employment, disruption of community life, impairment of public health, physical suffering, personal anguish and tragic loss of human life. The benefits of averting these consequences are of enormous magnitude, but are not included in the above statistics as to property damages averted.

There are now 75 operable flood control reservoirs in the Ohio River Basin, with 2 under construction. There are also 85 local protection projects with 7 under construction.

Recent floods, including the devastating flood of April 1977 in the Levisa Fork and Tug Fork of West Virginia and Kentucky and the more recent floods of 1978 and 1979 in Ohio and Kentucky, are grim reminders of the inadequacy of the Ohio River Basin's defenses against such ravages.

TABLE II
FLOOD DAMAGES PREVENTED BY CORPS OF
ENGINEERS PROJECTS, OHIO RIVER DIVISION

<u>FY</u>	<u>FY ONLY</u>	<u>CUMULATIVE</u>
1970	\$ 197,466,000	\$1,762,027,000
1971	34,360,000	1,796,387,000
1972	1,137,789,000	2,934,176,000
1973	109,876,000	3,044,052,000
1974	160,268,000	3,204,320,000
1975	344,299,000	3,548,619,000
1976 & 1976 T Qtr.	148,732,000	3,697,351,000
1977	1,024,012,000	4,721,363,000
1978	489,243,000	5,210,606,000
1979	1,389,540,000	6,600,146,000
1980	298,714,000	6,898,860,000
1981	231,431,000	7,108,361,000

We therefore urge timely completion of active and authorized projects and prompt funding and implementation of such additional projects as Congress may authorize. We are particularly concerned that an adequate flood control program for the Big Sandy and Upper Cumberland Valleys be continued for FY 1983.

We recognize the importance of considering non-structural alternatives to conventional flood control structures. We would emphasize, however, that because of the precipitous terrain through much of Appalachia and other sectors of the Ohio River Basin, communities and industries have little choice but flood plain location. Moreover, many industries require siting on the riverside both for water supply and for low-cost waterway access to materials, fuels and markets. The flood control program we recommend, therefore, in combination with any feasible non-structural alternatives, is essential to the social and economic well-being of the Ohio River Basin.

The flood control reservoirs now in operation in the Ohio River Basin contain a storage capacity of 26,215,000 acre-feet. Of this amount, 15,947,300 acre-feet are set aside for flood control, 509,200 acre-feet for water supply, 172,500 acre-feet for water quality, 8,375,000 acre-feet for recreation and conservation and

878,800 acre-feet for low-flow augmentation. In addition, 9 of the Ohio River Basin flood control reservoirs include hydro-electric power facilities with an installed capacity of 914 megawatts.

These features materially enhance the public values of water storage provided on the principle that sound conservation in an area of abundant but highly seasonal precipitation, such as the Ohio River Basin, requires storage of water where and when it falls for use when and where it is needed.

Encouragement of further development of multiple purpose water storage capacity by funding of authorized projects in accordance with the capabilities of the Corps of Engineers is clearly justified in the public interest. These features together with adequate flood control and navigation facilities are primary elements of the infrastructure upon which continued viability of the Ohio Valley economy deeply depends.

IV. STREAM BANK EROSION

Section 32 of the Water Resources Development Act of 1974 authorized a study of stream bank erosion on the Ohio and other rivers through use of demonstration projects to develop new techniques for bank stabilization. This Association regards this study as a matter of high priority. Damages to river bank property, in addition to pollution resulting from erosion, are matters of serious concern. Existing techniques of bank stabilization involve unusually high costs. Further, demonstration projects are essential to an accurate determination of causes of erosion. To assure accurate assignment of responsibility upon consideration of all pertinent factors and to provide improved and less costly techniques for dealing with this problem, we urge adequate funding, in line with the capabilities of the Corps of Engineers, of this program and expeditious completion of the authorized study together with continued monitoring after all demonstration projects have been constructed. We recommend also that consideration be given to existing requirements of local cooperation to determine their propriety with regard to demonstration projects of an experimental nature.

V. HEIGHTENED IMPORTANCE OF THE OHIO BASIN PROGRAM IN THE
CURRENT ERA

The Ohio Basin represents a body of water resource potentials the high promise of which has stood for years as an incentive for expeditious development and conservation in the interest of a growing national population of rising social and economic aspiration. But, the special problems of the 1980's--the inflation-unemployment dilemma, the dedication to social and environmental objectives, and the necessity for greatly expanded utilization of the Nation's domestic energy reserves--impart a still higher urgency to this incentive. It is in this context that the Ohio Valley Improvement Association earnestly recommends expeditious progress on the projects herein recommended.

O.V.I.A. RECOMMENDATIONS FOR FISCAL YEAR 1983

NAVIGATION

MAIN STREAM OF THE OHIO RIVER

<u>Continue Construction</u>	President's Budget Request FY 1983	OVIA ** Recommendation FY 1983
Emsworth Locks & Dam, Pa (Major Rehab.)	\$9,500,000	\$9,500,000
Smithland Locks & Dam, IL & KY	3,450,000	3,450,000
Locks & Dam 52, IL & KY (Major Rehab.)	800,000	800,000
Locks & Dam 53, IL & KY (Major Rehab.)	1,200,000	1,200,000

TRIBUTARIES OF THE OHIO

Initiate Advance Engineering & Design, Subject to Authorization

Grays Landing Lock, Monongahela River, PA	(X)
Point Marion Lock, Monongahela River, PA	(X)

Continue Construction

Tennessee-Tombigbee Waterway, AL & MS	186,000,000	191,000,000
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FLOOD CONTROL

RESERVOIRS

Continue Construction

Alum Creek Lake, OH	150,000	150,000
Beech Fork Lake, WV	1,300,000	1,300,000
Burnsville Lake, WV	2,850,000	2,850,000
Caesar Creek Lake, OH	620,000	620,000
Cave Run Lake, KY	1,450,000	1,450,000
Kinzua Dam & Allegheny Reservoir, PA & NY (Major Rehab.)	5,050,000	5,050,000
Muskingum River Lakes (Major Rehab.)	3,800,000	3,800,000
Muskingum River Lakes (Dam Safety Assur)	5,200,000	5,200,000
Paintsville Lake, KY	6,000,000	6,000,000
R.D. Bailey Lake, WV	3,300,000	3,300,000
Stonewall Jackson Lake, WV	16,200,000	16,200,000
Taylorsville Lake, KY	13,750,000	13,750,000

President
Budget Request
FY 1983

OVIA**
Recommendation
FY 1983

LOCAL PROTECTION PROJECTS

Continue Advance Engineering and Design

Russell and Allison Levee, IL	\$ -0-	\$ 160,000
South Frankfort, KY	92,000	380,000

Continue Construction

Chillicothe, OH	2,046,000	2,046,000 (C)
Evansville, IN	3,500,000	3,500,000
Levee Unit 5, IN	1,040,000	1,040,000
Levisa & Tug Fork of the Big Sandy & Cumberland River, WV, VA & KY	-0-	(X)
Mill Creek, OH	10,400,000	10,400,000
Newark, OH	300,000	300,000
Southwestern Jefferson County, KY	12,000,000	12,000,000

SPECIAL PROJECTS

Big South Fork National River
& Recreational Area, KY & TN

SURVEYS

Navigation Studies

Green and Barren Rivers, KY	150,000	300,000
Lower Cumberland & Tennessee Rivers (Below Barkley Canal)	250,000	300,000
Kanawha River	1,000,000	1,200,000
Big Sandy River, KY, WV, VA	230,000	500,000

Flood Control

Allegheny River Basin, PA & NY	100,000	350,000
Beaver River Basin, OH & PA	100,000	250,000
Central Ohio Survey, OH	200,000	300,000
Guyandotte River Basin, WV	220,000	220,000
Indianapolis, IN	-0-	150,000
Kanawha River Basin, Comprehensive Study, WV	300,000	300,000
Kentucky River & Tributaries	500,000	500,000
Kentucky River National Recreation Area, KY	-0-	150,000
Kiskiminetas River Basin, PA	325,000	525,000
Miami, Little Miami & Mill Creek Basins	400,000	400,000
Monongahela-Youghiogheny River Basin, MD, PA, & WV	750,000	900,000
Muskingum River Basin	100,000	100,000
Ohio River Main Stem (FDP)	1,185,000	1,900,000
Pigeon Creek, IN	\$ -0-	\$ 150,000
Saylorsville, KY	-0-	150,000
Upper Cumberland Basin, KY	300,000	400,000
Wabash River Basin, IL & IN (Authorization Rep.)	208,000	500,000
Whitewater River & Tributaries, IN & OH	-0-	150,000

METROPOLITAN REGION STUDIES

Special Studies

Metropolitan Region of Louisville, KY	-0-	150,000
Metropolitan Region of Nashville, TN	220,000	220,000

CONTINUATION OF PLANNING AND ENGINEERING STUDIES

Central Ohio Survey at Logan, OH	200,000	200,000
Central Ohio Survey at Nelsonville, OH	-0-	200,000
Gallipolis Locks and Dam	1,400,000	1,400,000
Miami River Basin Survey in Vicinity of Holes Creek at West Carrollton, OH	-0-	125,000
Miami River Basin Survey of Pleasant Run in Vicinity of Fairfield, OH	-0-	150,000
Muskingum River Basin Survey at Killbuck OH	150,000	150,000
Muskingum River Basin Survey at Mans- field, OH	250,000	250,000
North Chillicothe, OH	-0-	200,000
Saw Mill Run Study at Pittsburgh, PA	-0-	150,000

(X) Such Amount as the Corps of Engineers may Report as it capability.

(C) Complete Construction

** Equivalent to Corps of Engineers Capability Unless Otherwise Noted.

S U M M A R Y

OVIA'S INDUSTRIAL INVESTMENT-EXPANSION SURVEY

1977 - 1978

SUMMARY OF STATISTICAL INFORMATION ON INDUSTRIAL EXPANSIONIN THE OHIO VALLEY SURVEY AREABETWEEN 1950 AND 1978BY STATES

<u>STATE</u>	<u>1950-1976 SURVEYS</u>	<u>1977-1978 SURVEYS</u>	<u>TOTAL 1950-1978</u>
Alabama	\$ 6,248,948,736	\$ 768,903,200	\$ 7,017,851,936
Georgia	4,500,000	-0-	4,500,000
Illinois	396,025,968	11,747,744	407,773,712
Indiana	1,569,420,234	274,854,273	1,844,274,507
Kentucky	8,813,509,322	1,760,222,302	10,573,731,624
Mississippi	16,840,000	137,182,000	154,022,000
Ohio	8,224,859,381	509,849,313	8,734,708,694
Pennsylvania	11,853,096,313	1,259,496,855	13,112,593,168
Tennessee	11,221,502,613	1,487,182,387	12,708,685,000
West Virginia	4,989,964,371	950,900,232	5,940,864,603
Survey Area	<u>3,126,101,000</u>	<u>10,772,794</u>	<u>3,136,873,794</u>
TOTALS	<u>56,464,767,938</u>	<u>7,171,111,100</u>	<u>63,635,879,038</u>

S U M M A R YOHIO VALLEY INDUSTRIAL EXPANSION/INVESTMENT SURVEYBY INDUSTRY

<u>INDUSTRY</u>	<u>1950-1976</u> <u>SURVEYS</u>	<u>1977-1978</u> <u>SURVEY</u>	<u>1950-1978</u> <u>TOTAL</u>
Food and kindred products	\$ 400,855,836	\$ 80,212,622	\$ 481,069,458
Communications	4,933,241,640	462,731,032	5,395,972,672
Tobacco manufacturers	103,566,000	13,482,000	117,048,000
Transportation facilities	665,239,597	53,885,617	709,125,214
Rail, Water and Air			
Textile and Mill Products	147,158,000	2,821,208	149,979,208
Tractors and farm implements	62,061,000	-0-	62,061,000
Apparel and related products	87,860,000	1,750,000	89,610,000
Atomic Energy operation	3,682,594,212	148,140,000	3,830,734,212
Lumber and wood products	45,400,000	3,039,625	48,439,625
Furniture and fixtures	26,650,000	1,000,000	27,650,000
Pulp, paper and rproducts	846,163,916	223,910,400	1,070,074,316
Printing and Publishing	151,711,262	981,015	152,692,277
Chemicals and products	4,309,648,453	100,544,400	4,420,192,853
Petroleum products	294,243,336	110,720,744	404,964,080
Coal products	1,066,063,096	175,272,000	1,241,335,096
Rubber products	125,850,000	10,400,000	136,260,000
Leather and leather products	31,854,000	-0-	31,854,000
Stone, clay and glass products	636,183,921	60,576,000	696,759,921
Iron and steel manufacturers	5,926,743,062	133,488,010	6,060,231,072
Metal fabricators	591,490,805	22,251,000	613,741,805
Non-ferrous metals	2,652,713,000	583,480,000	3,236,193,000
Machinery except electrical	233,158,000	5,900,000	239,058,000
Research center	509,344,000	11,965,490	521,309,490
Electrical machinery	401,521,813	16,635,805	418,157,618
Transportation equipment	901,127,955	39,693,000	940,820,955
Instruments and related products	148,301,000	3,600,000	151,901,000
Miscellaneous manufacturers,			
including ordnance	798,606,188	23,062,867	821,669,055
Administrative and Auxiliary-	202,486,900	329,799,500	532,286,400
Offices and Warehouses			
Appliances	403,165,886	11,026,000	414,191,886
Gas and Electric Utilities and			
Electric Generating Plants	25,666,340,601	4,539,611,559	30,205,952,160
Oil and Gas Pipelines	413,424,459	1,131,206	414,555,665
TOTALS	\$56,464,767,938	7,171,111,100	63,635,879,038

OHIO RIVER DIVISION
FISCAL YEAR 1983 FUNDING CAPABILITIES
AUTHORIZED STUDIES
(Amounts in Thousands)

A P P E N D I X

Congressional Districts	Study and State	Estimated Federal Cost	Amount Included in President's Budget	Study Capability	Purpose of Additional Capability
PA 23 NY 39	Allegheny River Basin, PA & NY (FDP)	2,250.0	100	350	Advance study completion by one year.
PA 25 OH 19	Beaver-Mahoning Rivers Canalization, OH & PA (N)	935.0	0	0	Lack of recent expression of local interest.
PA 24,25 OH 19	Beaver River Basin, OH & PA (FDP)	1,575.0	100	250	Advance completion of Shenango River Lake Hydropower interim study by one year.
KY 7 VA 9 WV 4	Big Sandy River, KY, VA & WV (FDP&N)	3,600.0	230	500	Advance completion of Fishtrap Hydropower interim study by 3 months
WV 3	Cabin Creek, WV Demonstration Reclamation Project (FDP)	179.1	0	0	Fully funded.
IL 24	Cache River (Upper Basin) IL (FDP)	65.0	0	0	Lack of recent expression of local interest.
OH 4,6,7 10,12,15	Central Ohio (FDP)	3,400.0	200	300	Advance Agricultural interim study by 3 months.

PA 18,22	Chartiers Creek, PA (FDP)	350.0	0	0	Study will continue with available funds.
KY 1	Clarks River Basin, KY (FDP)	140.0	0	0	Study will continue with available funds.
IN 9	Columbus, IN (FDP)	283.2	0	0	Fully funded.
WV 2,3	Gauley River, WV (FDP)	1,072.5	0	0	Fully funded.
OH 4	Grand Lake, St. Marys, OH (FDP)	288.0	0	0	Fully funded.
KY 1,2	Green and Barren Rivers, KY (N)	1,300.0	150	300	Advance study completion by 1 year.
WV 3,4	Guyandotte River Basin, Vicinity of Logan and Mullens, WV (FDP)	1,509.0	220	220	No additional requirement.
IN 6,11	Indianapolis, IN (FDP)	430.0	0	150	Initiate and complete reconnaissance phase of study.
NC 5,10 VA 5,9 WV 2,3,4	Kanawha Basin Comprehensive Study (Authorization) (C)	3,194.0	300	300	No additional requirement.
WV 3	Kanawha River Navigation Study, WV (N)	3,200.0	1,000	1,200	Advance study completion by six months.
KY 4,5 6,7	Kentucky River National Recreation Area, KY (SF)	506.0	0	150	Initiate and complete reconnaissance phase of study.

FISCAL YEAR 1983 FUNDING CAPABILITIES
AUTHORIZED STUDIES
(Amounts in Thousands)

Congressional Districts	Study and State	Estimated Federal Cost	Amount Included in President's Budget	Study Capability	Purpose of Additional Capability
KY 4,5 6,7	Kentucky River and Tributaries, KY (FDP)	1,800.0	500	500	No additional requirement.
PA 12,21	Kiskiminetas River Basin, KY (FDP)	2,000.0	325	525	Advance Greater Johnstown Area B interim study completion by one year.
IN 9 KY 3,4	Louisville Harbor, KY (N)	92.0	0	0	Fully funded.
KY 1	Lower Cumberland and Tennessee River below Barkley Canal, KY (N)	1,445.0	250	300	Advance navigation systems study by two months.
OH 1,2	Metropolitan Region of Cincinnati, OH (FDP)	2,200.0	0	0	Lack of local cooperation.
KY 7 OH 6,10 WV 4	Metropolitan Region of Huntington, WV, Ashland, KY and Portsmouth, OH (FDP)	2,369.4	0	0	Fully funded.
KY 3,4	Metropolitan Region of Louisville, KY (FDP)	500.0	0	150	Initiate and complete reconnaissance phase of study.

TN 4,5 6	Metropolitan Region of Nashville, TN (FDP)	2,974.0	220	220	No additional requirement.
OH 18 WV 1,2	Metropolitan Region of Wheeling, OH & WV (FDP)	1,950.0	0	0	Fully funded.
OH 1,2 6,8	Miami River, Little Miami River, and Mill Creek Basins, OH (FDP)	3,880.0	400	400	No additional requirement.
OH 19	Milton Dam and Reservoir, Mahoning River, OH (NF)	150.0	0	0	Fully funded.
MD 6 PA 21,22 WV 1,2	Monongahela-Youghiogheny River Basin, MD, PA & WV (FDP)	6,500.0	750	900	Advance completion of Connellsville Flood Protection interim study by 1 year.
IN 8	Mount Vernon, IN (FDP)	110.0	0	0	Lack of recent expression of local interest.
OH 10,12 13,14,16 17,18	Muskingum River, OH (FDP)	1,775.0	100	100	No additional requirement.
OH 6,10 18	Ohio Port Authorization Studies (N)	109.0	0	0	Fully funded.
NA	Ohio River Main Stem (FDP)	7,500.0	1,185	1,900	Advance completion of Hydropower and Navigation interim studies by 1 year.
NA	Ohio River 12 ft. Channel (N)	3,400.0	0	0	Deferred pending results of compre- hensive studies of the National Waterway Systems Study under juris- diction of the Secretary of the Army.

FISCAL YEAR 1983 FUNDING CAPABILITIES
AUTHORIZED STUDIES
(Amounts in Thousands)

Congressional Districts	Study and State	Estimated Federal Cost	Amount Included in President's Budget	Study Capability	Purpose of Additional Capability
NA	Ohio and Kanawha Rivers, WV (Eroding Bank)	629.0	0	0	Deferred pending analysis of results from the Streambank Erosion Control Demonstration program.
IN 8	Pigeon Creek, IN (FDP)	566.5	0	150	Initiate and complete reconnaissance phase of study.
IN 24	Saline River and Tributaries IL (FDP)	156.0	0	0	Fully funded.
KY 7	Saylorsville, KY (FDP)	500.0	0	150	Initiate and complete reconnaissance phase of study.
OH 18 PA 25	Southeast Ohio Survey (FDP)	745.0	0	0	Lack of recent expression of local interest.
IN 8	Tell City, IN (FDP)	52.5	0	0	Lack of recent expression of local interest.
KY 1	Tradewater River Basin, KY (FDP)	500.0	0	150	Initiate and complete reconnaissance phase of study.
PA 20, 21	Turtle Creek Basin, PA (FDP)	660.0	0	0	Lack of recent expression of local interest.
NY 39 PA 23	Upper Allegheny River Basin, NY & PA (FDP)	1,160.0	0	0	Study will continue with available funds.

KY 5	Upper Cumberland River Basin, KY (FDP)	3,069.0	300	400	Advance preliminary level studies by two months.
IL 22,24 In 2,4,5 6,7,8,9, 10,11	Wabash River Basin (Authorization Report), IL & IN (C)	3,050.0	208	500	Advance completion of East Fork White River LPP Interim by one year.
KY 2 TN 6	West Fork of Drakes Creek, TN & KY (FDP)	107.8	0	0	Lack of recent expression of local interest.
IN 9,10 OH 2,8	Whitewater River and Tributaries, IN & OH (FDP)	612.0	0	150	Initiate and complete reconnaissance phase of study.
OH 6	Whitewater Canoe-Kayak Slalom Course, Meldahl Locks and Dam, Ohio River (N)	50	0	0	Lack of recent expression of local interest.
CONTINUATION OF PLANNING AND ENGINEERING STUDIES					
OH 10	Central Ohio Study at Logan, Ohio (FDP)	690.0	200	200	No additional requirement.
OH 10	Central Ohio Study at Nelsonville, Ohio (FDP)	690.0	0	200	Continue study.
OH 1 WV 3	Gallipolis Locks and Dam, OH & WV (N)	2,808.0	1,400	1,400	No additional requirement.
OH 3,8	Miami River Basin Survey in Vicinity of Holes Creek at West Carrollton, OH (FDP)	300.0	0	125	Continue study.

FISCAL YEAR 1983 FUNDING CAPABILITIES
AUTHORIZED STUDIES
(Amounts in Thousands)

Congres- sional Districts	Study and State	Estimated Federal Cost	Amount Included in President's Budget	Study Capability	Purpose of Additional Capability
OH 3,8	Miami River Basin Survey of Pleasant Run in Vicinity of Fairfield, OH (FDP)	300.0	0	150	Continue study.
OH 17	Muskingum River Basin Survey at Killbuck, OH (FDP)	800.0	150	150	No additional requirement.
OH 17	Muskingum River Basin Survey at Mansfield, OH (FDP)	630.0	250	250	No additional requirement.
OH 6	Central Ohio Study at North Chillicothe, OH (FDP)	800.0	0	200	Continue study.
PA 14	Saw Mill Run Study at Pittsburgh, PA (FDP)	400.0	0	150	Continue study.
(N)	Navigation				
(FDP)	Flood damage prevention				
(C)	Comprehensive				
(SP)	Special				

FISCAL YEAR 1983 FUNDING CAPABILITIES
AUTHORIZED STUDIES
(Amounts in Thousands)

Congressional Districts	Study and State	Estimated Federal Cost	Amount Included in President's Budget	Study Capability	Purpose of Additional Capability
SUPPLEMENTAL PREAUTHORIZATION STUDIES					
KY 2	Camp Ground Lake, KY (Phase I) (FDP)	2,900.0 (1,400.0)	0	0	Lack of recent expression of local interest.
PA 12,23	Clarion River Basin, Acid Mine Drainage (Phase I) (FDP)	1,900.0 (700.0)	0	0	Study will continue with available funds.
KY 7 VA 9 WV 4	Tug Fork Valley, Big Sandy River Basin, KY, VA, & WV (Phase I) (FDP)	6,500.0 (3,793.2)	0	0	Fully funded.

FISCAL YEAR 1983 FUNDING CAPABILITIES
CONSTRUCTION PROJECTS
(Amounts in Thousands)

Congres- sional Districts	Project and State	Estimated Federal Cost 2/	Amount Included in President's Budget	Project Capability	Purpose of Additional Capability
OH 12	Alum Creek Lake, OH	56,700.0 $\frac{1}{2}$	150 (C)	150 (C)	No additional requirement.
WV 4	Beech Fork Lake, WV	47,300.0 $\frac{1}{2}$	1,300 (C)	1,300 (C)	No additional requirement.
KY 5 TN 2	Big South Fork National River and Recreation Area, KY & TN	103,522.0 $\frac{1}{2}$	10,875 (C)	13,000 (C)	Acquisition of additional real estate and trails.
WV 3	Burnsville Lake, WV	54,500.0 $\frac{1}{2}$	2,850 (C)	2,850 (C)	No additional requirement.
OH 6, 7	Caesar Creek Lake, OH	65,000.0 $\frac{1}{2}$	620 (C)	620 (C)	No additional requirement.
IN 8, 9 KY 2,3,4	Cannelton Locks and Dam IN & KY	99,220.4 $\frac{1}{2}$	0 (C)	0 (C)	Fully funded.
KY 7	Cave Run Lake, KY	79,900.0 $\frac{1}{2}$	1,450 (C)	1,450 (C)	No additional requirement.
PA 18,22	Chartiers Creek, PA	32,000.0	0 (C)	0 (C)	Project will continue with available funds.
OH 6	Chillicothe, OH	22,100.0 $\frac{1}{2}$	2,046 (C)	2,046 (C)	No additional requirement.
KY 4	Dayton, KY	12,820.2 $\frac{1}{2}$	0 (C)	0 (C)	Fully funded.

PA 18	Emsworth Locks & Dam, Ohio River, PA (MR)	36,000.0 $\frac{1}{2}$	9,500 (MR)	9,500 (MR)	No additional requirement.
IN 8	Evansville, IN	53,400.0 $\frac{1}{2}$	3,500 (C)	3,500 (C)	No additional requirement.
OH 18 WV 1	Hannibal L's & D, OH & WV	88,040.0	0 (C)	0 (C)	Fully funded.
KY 39 PA 23	Kinzua Dam & Allegheny Reservoir, PA & NY (Major Rehabilitation)	6,000.0 $\frac{1}{2}$	5,050 (MR)	5,050 (MR)	No additional requirement.
KY 5	Laurel River Lake, KY	59,400.0 $\frac{1}{2}$	2,170 (C)	2,170 (C)	No additional requirement.
IN 8	Levee Unit 5, IN	8,480.0 $\frac{1}{2}$	1,040 (C)	1,040 (C)	No additional requirement.

LEVISA & TUG FORKS--SEC. 202

KY 57 WV 4 VA 9	Levisa & Tug Fork of the Big Sandy & Cum- berland River, WV, VA, & KY	18,600.0 $\frac{1}{2}$	0 (C)	Under Review
KY 5,	Barbourville, KY	21,600.0 $\frac{1}{2}$	0 (C)	Under Review
KY 7	Pikeville, KY	8,000.0 $\frac{1}{2}$	0 (C)	Under Review
KY 5	Pineville, KY	47,300.0 $\frac{1}{2}$	0 (C)	Under Review

FISCAL YEAR 1983 FUNDING CAPABILITIES
CONSTRUCTION PROJECTS
(Amounts in Thousands)

Congres- sional Districts	Project and State	Estimated Federal Cost 2/	Amount Included in President's Budget	Project Capability	Purpose of Additional Capability
WV 4	Williamson, WV	88,900.0 $\frac{1}{2}$	0 (C)	Under Review	
IL 24 KY 1	Locks and Dam 52, IL & KY (Major Rehabilitation)	9,900.0 $\frac{1}{2}$	800 (MR)	800 (MR)	No additional requirement.
IL 24 KY 1	Locks and Dam 53, IL & KY (Major Rehabilitation)	6,300.0 $\frac{1}{2}$	1,200 (MR)	1,200 (MR)	No additional requirement.
KY 7	Martin, KY	9,850.0 $\frac{1}{2}$	0 (C)	0 (C)	Lack of local cooperation.
OH 1,2,8	Mill Creek, OH	249,000.0 $\frac{1}{2}$	10,400 (C)	10,400 (C)	No additional requirement.
PA 20	Monongahela River, Locks and Dam 3, PA (Major Rehabilitation)	15,977.0 $\frac{1}{2}$	0 (MR)	0 (MR)	Fully funded.
OH 10,16 17,18	Muskingum River Lakes, OH (Major Rehabilitation)	78,800.0 $\frac{1}{2}$	3,800 (MR)	3,800 (MR)	No additional requirement.
OH 10,16 17,18	Muskingum River Lakes, (Dam Safety Assurance)	94,900.0 $\frac{1}{2}$	5,200 (DS)	5,200 (DS)	No additional requirement.

OH 17	Newark, OH (Bog Pond Run)	10,800.0 $\frac{1}{2}$	300 (C)	300 (C)	No additional requirement.
IN 8 KY 2	Newburgh Locks and Dam, IN & KY	105,100.0 $\frac{1}{2}$	0 (C)	0 (C)	Project will continue with available funds.
KY 7	Paintsville Lake, KY	61,000.0 $\frac{1}{2}$	6,000 (C)	6,000 (C)	No additional requirement.
WV 4	R. D. Bailey Lake, WV	193,000.0 $\frac{1}{2}$	3,300 (C)	3,300 (C)	No additional requirement.
IL 24 IN 8 KY 1	Smithland L's & D, IL & KY	276,700.0 $\frac{1}{2}$	3,450 (C)	3,450 (C)	No additional requirement.
KY 4	Southwestern Jefferson County, KY	68,700.0 $\frac{1}{2}$	12,000 (C)	12,000 (C)	No additional requirement.
WV 2	Stonewall Jackson Lake, WV	201,000.0 $\frac{1}{2}$	16,200 (C)	16,200 (C)	No additional requirement.
KY 2	Taylorsville Lake, KY	99,400.0 $\frac{1}{2}$	13,750 (C)	13,750 (C)	No additional requirement.
AL 4,7 MS 1,2,3	Tennessee-Tombigbee Waterway, AL & MS Mobile District	1,830,000.0 $\frac{1}{2}$ (1,098,000.0 $\frac{1}{2}$)	186,000 (C) (131,000) (C)	191,000 (C) (136,000) (C)	Advance award of second excavation contract below Lock A six months.
	Nashville District	(732,000.0 $\frac{1}{2}$)	(55,000) (C)	(55,000) (C)	No additional requirement.
IN 8 KY 1	Uniontown L's & D, IN & KY	100,640.2 $\frac{1}{2}$	0 (C)	0 (C)	Fully funded.

FISCAL YEAR 1983 FUNDING CAPABILITIES
CONSTRUCTION PROJECTS
(Amounts in Thousands)

Congres- sional Districts	Project and State	Estimated Federal Cost 2/	Amount Included in President's Budget	Project Capability	Purpose of Additional Capability
OH 6	William H. Harsha Lake, OH	54,700.0 $\frac{1}{2}$	0 (C)	0 (C)	Project will continue with available funds. Increased up front financing by local interests is unlikely.
OH 10 WV 1	Willow Island, L's & D, OH & WV	78,100.0 $\frac{1}{2}$	0 (C)	0 (C)	Project will continue with available funds.
KY 7	Yatesville Lake, KY	96,700.0 $\frac{1}{2}$	0 (C)	Under Review	
(C) Construction (MR) Major Rehabilitation (DS) Dam Safety Assurance					

1/ Cost estimate includes an allowance for inflation through construction period.

2/ Estimated Federal cost subject to reduction for projects which may have up front financing from local interests.

FISCAL YEAR 1983 FUNDING CAPABILITIES
OPERATION AND MAINTENANCE
(Amounts in Thousands)

Congressional Districts	Project & State	Type	Amount Included		Project Capability	Purpose of Additional Capability
			In President's Budget			
PA 12, 14, 18	Allegheny River, PA	N	\$ 203	\$4,275		Resurface Lockwalls and Esplanade--Lock 4 Operate waterway from Lock 2 (M.P. 7) to head of navigation (M.P. 72) (\$3,842,000) <u>3,842</u> 4,072
OH 12	Alum Creek Lake, OH	FC	430	430		No additional requirement.
KY 1 TN 7, 6	Barkley Dam & Lake Barkley, KY & TN	MP	3,437	3,967		Paint Intake Gantry Crane & Spillway Gates 130 Repair Tow Haulage Unit 100 Dredge Bends MI 35-47 200 Increase hours of operations at Locks (\$50,000) 50 Snagging & repair of mooring facilities (\$50,000) <u>50</u> 530
KY 2	Barren River Lake, KY	FC	870	870		No additional requirement
WV 4	Beech Fork Lake, WV	FC	485	485		No additional requirement.

FISCAL YEAR 1983 FUNDING CAPABILITIES
OPERATION AND MAINTENANCE
(Amount in Thousands)

Congressional District	Project & State	Type	Amount Included In President's		Project Capability	Purpose of Additional Capability	
			Budget	Capabillity			
OH 19	Berlin Lake, OH	FC	1,222	1,222		No additional requirement.	
VA 9 WV 2	Bluestone Lake, WV	FC	615	615		No additional requirement.	
IN 9, 10	Brookville Lake, IN	FC	370	370		No additional requirement.	
KY 5	Buckhorn Lake, KY	FC	630	630		No additional requirement.	
WV 3	Burnsville Lake WV	FC	590	590		No additional requirement.	
OH 6, 15	Caesar Creek Lake, OH	FC	359	479		Repair stilling basin.	120
IN 7	Cagles Mill Lake, IN	FC	315	415		Replace emergency gate hoist	100
KY 7	Carr Fork Lake, KY	FC	705	705		No additional requirement.	
KY 7	Cave Run Lake, KY	FC	355	355		No additional requirement.	
IN 7	Cecil M. Harden Lake, IN	FC	510	510		No additional requirement.	
TN 4	Center Hill Lake, TN	MP	2,827	4,827		Exploratory drilling & grouting of the embankment	2,000

TN 5, 6	Cheatham L&D, TN	MP	2,810	2,910	Increase hours of operation at locks (\$25,000) Snagging and repair of mooring facilities (\$75,000)	25 <u>75</u> 100
OH 7	C.J. Brown Dam & Res., OH	PC	345	345	No additional requirement.	
PA 22	Conemaugh River Lake, PA	PC	535	728	Repair Bridge Deck; Refurbish and Paint Gates and Bridge	193
TN 4	Cordell Hull Dam & Res., TN	MP	2,517	2,517	No additional requirement.	
PA 12	Crooked Creek Lake, PA	PC	800	920	Repair Concrete on Bridge Seats and Spillway Walls	120
TN 4 KY 5	Dale Hollow Lake, TN & KY	MP	2,410	2,410	No additional requirement.	
OH 6	Deer Creek Lake, OH	PC	435	435	No additional requirement.	
OH 7, 12	Delaware Lake, OH	PC	950	950	No additional requirement.	
KY 7	Dewey Lake, KY	PC	685	685	No additional requirement.	
OH 10, 17	Dillon Lake, OH	PC	325	325	No additional requirement.	
PA 23	East Branch, Clarion PA	PC	692	692	No additional requirement.	
WV 4	East Lynn Lake, WV	PC	755	755	No additional requirement.	

FISCAL YEAR 1983 FUNDING CAPABILITIES
OPERATION AND MAINTENANCE
(Amount in Thousands)

Congressional District	Project & State	Type	Amount Included		Project Capability	Purpose of Additional Capability
			In President's Budget			
WV 2	Elkins, WV	PC/CI	4	4		No additional requirement.
KY 7	Fishtrap Lake, KY	FC	1,455	1,455		No additional requirement.
KY 7	Grayson Lake, KY	FC	575	575		No additional requirement.
KY 1, 2	Green & Barren Rivers, KY	N	1,255	1,555		Increase hours of operations at Locks (1) (\$25,000), & (2) (\$25,000) Repair upper gates at Locks 1 (\$250,000)
					50	
					250	
					300	
KY 5	Green River Lake, KY	FC	860	860		No additional requirement
IN 4, 10	Huntington Lake, IN	FC	365	465		Riprap at Outlet Channel and Levees
PA 12	Johnstown, PA	PC/CI	372	372		No additional requirement.
VA 9	John W. Flannagan Dam & Res., VA	FC	630	630		No additional requirement.
TN 5, 4	J. Percy Priest, TN	MP	1,862	1,862		No additional requirement.

WV 2 & 3	Kanawha River Locks and Dams, WV	N	5,383	6,083	Increase hours of operations at Locks (Winfield) (\$75,000), (Marmet) (\$75,000), (London) (\$50,000) Install miter gate at Winfield L/D (\$500,000)	200 500 <u>700</u>
KY 4, 5, 6	Kentucky River, KY	N	189	1,614	Channel Dredging, Locks 1-4. Operate waterway from Lock 1 (M.P. 4) to Lock 4 (M.P. 82) (\$1,295,000)	130 <u>1,295</u>
PA 23	Kinzua Dam & Allegheny Reservoir, PA & NY	FC	1,064	1,064	No additional requirement.	1,425
NY 39						
KY 5	Laurel River Lake, KY	MP	608	608	No additional requirement.	
PA 21	Loyalhanna Lake, PA	FC	564	671	Paint Crest Gates and Service Bridge; Restore Drain Holes.	107
PA 19	Mahoning Creek Lake, PA	FC	330	509	Repair Concrete on Bridge Decks, Parapet Walls, Spray Walls, and Bridge Piers.	179
KY 5	Martins Fork Lake, KY	FC	436	436	No additional requirement	
OH 16	Massillon LPP, OH	FC/CI	15	15	No additional requirement.	
OH 14	Michael J. Kirwan Dam & Reservoir, OH	FC	406	406	No additional requirement.	
KY 5	Middlesboro, Cumber- land River Basin, KY	FC	39	39	No additional requirement.	

OH 17	Newark LPP, OH	FC	15	15	No additional requirement.	
KY 2	Nolin Lake, KY	FC	920	920	No additional requirement.	
OH 17	North Branch of Kokosing Lake, OH	FC	150	150	No additional requirement.	
VA 9	North Fork of Pound Lake, VA	FC	235	235	No additional requirement.	
PA 18, 20 22, 25	Ohio River L&D Construction, PA OH & WV (Pittsburgh)	N	28,472	29,752		
			(8,406)	(8,406)	No additional requirement.	
WV 1, 3, 4	(Huntington)		(9,336)	(9,336)	No additional requirement.	
IL 24	(Louisville)		(10,730)	(12,010)	Repair esplanade and install handrailing on lock walls at Markland.	200
IN 8, 9					Repair guard cells at McAlpine.	400
KY 1, 2, 3					Bank protection, Indiana side at McAlpine Dam.	680
4, 6, 7					Purchase emergency bulkheads for Markland Dam.	
OH 1, 2, 6 10, 18						<u>1,280</u>
PA 18, 20 22, 25	Ohio River Open Channel Work (Pittsburgh)	N	8,205	8,355	No additional requirement.	
			(440)	(440)		
WV 1, 3, 4	(Huntington)		(4,565)	(4,565)	No additional requirement.	
IL 24	(Louisville)		(3,200)	(3,350)	Dredge Licking River (30,000 C.Y.)	150

FISCAL YEAR 1983 FUNDING CAPABILITIES
OPERATION AND MAINTENANCE
(Amount in Thousands)

Congres- sional District	Project & State	Type	Amount Included In President's Budget	Project Capability	Purpose of Additional Capability
IN 8, 9	Old Hickory Lock & Dam, TN	MP	3,421	4,096	Repair Power Plant Roof. Dredging miles 305.0 to 309.5
KY 1, 2, 3, 4, 6, 7					150 525 675
OH 1, 2, 6, 10, 18					
TN 5, 4					
OH 6	Paint Creek Lake, OH	FC	490	490	No additional requirement.
KY 7	Paintsville Lake, KY	FC	460	460	No additional requirement.
IN 8	Patoka Lake, IN	FC	330	330	No additional requirement.
PA 12	Punxsutawney, PA	FC/CI	5	5	No additional requirement.
WV 4	R.D. Bailey Lake, WV	FC	655	655	No additional requirement.
OH 10	Roseville LPP, OH	FC/CI	15	15	No additional requirement.
KY 2	Rough River Lake, KY	FC	945	945	No additional requirement.
IN 4	Salamonie Lake, IN	FC	345	345	No additional requirement.
PA 24 OH 11	Shenango River Lake, PA & OH	FC	1,458	1,458	No additional requirement.

WV 3	Summersville Lake, WV	FC	1,010	1,010	No additional requirement.	
WV 2, 3	Sutton Lake, WV	FC	860	860	No additional requirement.	
KY 2	Taylorsville Lake, KY	FC	240	240	No additional requirement.	
KY 1	Tennessee River,	NL	5,554	6,804	Repair Gate Operating Machinery	200
TN 7, 6, 3	TN, AL & KY				Replace Boom Cables,	
AL 1, 5, 4					Guntersville	100
					Repair Gate and Valve Seals	100
					Dredging (mile 66)	200
					Increase hours of operations at	
					Locks (Kentucky) (\$75,000),	
					(Pickwick) (\$75,000), (Wilson)	
					(\$75,000), (Wheeler) (\$75,000),	
					(Guntersville) (\$75,000), (Nickajack)	
					(\$75,000), (Chickamauga) (\$75,000),	
					(Watts Bar) (\$30,000), (Ft. Loudoun)	
					(\$30,000) Biological assessment	585
					for dredging (\$45,000)	45
					Dredge lower approaches Wilson	
					and Kentucky Locks (\$20,000)	20
						<u>1,250</u>
PA 23	Tionesta Lake, PA	FC	765	765	No additional requirement.	
OH 10	Tcos Jenkins Lake, OH	FC	185	185	No additional requirement.	
WV 2	Tygart River Lake, WV	N/FC	527	678	Repair trash boom and dam gate.	151
PA 24	Union City Lake, PA	FC	303	303	No additional requirement.	

FISCAL YEAR 1983 FUNDING CAPABILITIES
OPERATION AND MAINTENANCE
(Amount in Thousands)

Congressional District	Project & State	Type	Amount Included		Project Capability	Purpose of Additional Capability
			In President's Budget			
OH 2	West Fork Mill Creek Lake, OH	FC	315	315	315	No additional requirement.
OH 6	William H. Harsha Lake, OH	FC	395	395	395	No additional requirement.
KY 5	Wolf Creek Dam Lake Cumberland, KY	MP	2,516	2,516	2,516	No additional requirement.
PA 24	Woodcock Creek Lake, PA	FC	453	453	453	No additional requirement.
PA 12	Youghiogheny River Lake, PA	FC	968	968	968	No additional requirement.
	General Regulatory Functions	PN	4,025	4,025	4,025	
	(Pittsburgh)		(745)	(745)	(745)	No additional requirement.
	(Huntington)		(1,115)	(1,115)	(1,115)	No additional requirement.
	(Louisville)		(865)	(865)	(865)	No additional requirement.
	(Nashville)		(1,300)	(1,300)	(1,300)	No additional requirement.

CI	Channel Improvement				
FC	Flood Control				
MP	Multiple Purpose				
N	Navigation				
PN	Protection of Navigation				
	Inspection of Completed Works	FC	427	427	
	(Pittsburgh)		(54)	(54)	No additional requirement.
	(Huntington)		(100)	(100)	No additional requirement.
	(Louisville)		(250)	(250)	No additional requirement.
	(Nashville)		(23)	(23)	No additional requirement.

FISCAL YEAR 1983 FUNDING CAPABILITIES
PLANNING PROJECTS
(Amounts in Thousands)

<u>Congres- sional Districts</u>	<u>Project and State</u>	<u>Estimated Federal Cost</u>	<u>Amount Included in President's Budget</u>	<u>Project Capability</u>	<u>Purpose of Additional Capability</u>
KY 5 TN 4	Celina Lake, KY & TN	221,450.0	0 (P)	500 (P)	Initiate Planning.
IN 9, 10	Downeyville Lake, IN	63,900.0	0 (P)	0 (P)	Lack of recent expression of local cooperation.
KY 6	Frankfort, KY (South Frankfort Section)	4,730.0	92 (P)	380 (P)	Advance completion of planning by 15 months.
KY 7	Kehoe Lake, KY	43,300.0	0 (P)	0 (P)	Lack of recent expression of local cooperation.
IL 22	Louisville Lake, IL	104,000.0	0 (P)	0 (P)	Lack of recent expression of local cooperation.
WV 4	Oceana, WV	5,110.0	0 (P)	0 (P)	Lack of local cooperation.
IL 22	Russell & Allison Levee, IL	16,600.0	0 (P)	160 (P)	Initiate planning.

STATEMENT OF WILLIAM P. MORELLI, STAFF COUNSEL AND DIRECTOR OF GOVERNMENT
AFFAIRS, THE OHIO RIVER CO.

I AM WILLIAM P. MORELLI, STAFF COUNSEL AND DIRECTOR OF GOVERNMENT AFFAIRS FOR THE OHIO RIVER COMPANY OF CINCINNATI, OHIO. THE OHIO RIVER COMPANY IS A SUBSIDIARY OF MIDLAND ENTERPRISES INC. AND ONE OF A FAMILY OF COMPANIES WHICH PROVIDES BARGE TRANSPORTATION, BARGE CONSTRUCTION AND REPAIR, TERMINALING, AND SUPPORT SERVICES THROUGHOUT THE INLAND WATERWAY SYSTEM. WITH APPROXIMATELY 1700 BARGES AND 75 TOWBOATS AND SUPPORT VESSELS, THE MIDLAND FLEET CARRIES ALMOST 40 MILLION TONS AND 20 BILLION TON/MILES PER YEAR, MAKING IT ONE OF THE LARGEST FULLY-INTEGRATED WATER TRANSPORTATION COMPANIES IN THE COUNTRY.

I AM HERE TODAY TO DISCUSS WITH THE COMMITTEE THE CONTINUING DELAYS AND OPERATIONAL INEFFICIENCIES CAUSED BY THE EXISTING LOCKS AND DAM AT GALLIPOLIS, OHIO.

THIS COMMITTEE IS WELL AWARE THAT THE EXISTING STRUCTURE AT GALLIPOLIS, COMPLETED IN 1937, IS DILAPIDATED, DANGEROUS, AND WHOLLY INADEQUATE FOR PRESENT AND FUTURE RIVER TRAFFIC DEMANDS. CONGESTION AT GALLIPOLIS CONTINUES TO MAKE IT THE MAJOR BOTTLENECK ON AN OTHERWISE MODERNIZED OHIO RIVER.

DELAY COSTS AT GALLIPOLIS, 1981-THE OHIO RIVER COMPANY

DURING 1981, THE OHIO RIVER COMPANY MOVED APPROXIMATELY 8,000,000 TONS OF BULK GOODS THROUGH THE GALLIPOLIS LOCKS AND DAM. THIS WAS ROUGHLY 18% OF THE TOTAL TONNAGE MOVED THROUGH THAT STRUCTURE IN 1981. WE EXPERIENCED 114 UPBOUND DELAYS AVERAGING 5.9 HOURS PER DELAY, OR 672.6 HOURS; AND 120 DOWNBOUND DELAYS AVERAGING 5.4 HOURS PER DELAY, OR 648 HOURS, FOR A TOTAL OF 1,320.6 HOURS OF DELAY AT GALLIPOLIS LOCKS AND DAM IN 1981. AT A TOTAL DELAY COST PER HOUR OF \$353.08, THE OHIO RIVER COMPANY INCURRED \$466,277.00 IN DELAYS DUE TO WAITING TIME AT GALLIPOLIS DURING 1981. OF THIS AMOUNT, \$150,046.00 IS ATTRIBUTABLE TO FUEL CONSUMED WHILE WAITING TO TRAVERSE THE

LOCKS. THE REMAINING \$316,231.00 OF DELAY COSTS ARE ASSOCIATED WITH OTHER OPERATING EXPENSES, SUCH AS CREW COSTS, MAINTENANCE AND REPAIR, AND LOST OPPORTUNITY ON THE BARGES DELAYED. IT MUST BE MENTIONED THAT THIS TOTAL DELAY COST OF \$466,277.00 WOULD HAVE INCREASED BY ABOUT 19.5% HAD IT NOT BEEN FOR THE 70-DAY COAL STRIKE DURING 1981. THIS WOULD HAVE BROUGHT THE TOTAL DELAY COSTS TO ALMOST \$560,000.00.

LET ME STATE THESE FIGURES ANOTHER WAY. OUR COMPANY LOST 55 OPERATING DAYS, 15% OF THE TOTAL OPERATING DAYS FOR THE TOWS INVOLVED, WAITING TO LOCK THROUGH AT GALLIPOLIS. IT COST US \$8,474.00 FOR EACH OPERATING DAY LOST AND BETWEEN \$1,906.00 AND \$2,083.00 FOR EACH INDIVIDUAL DELAY. INCLUDED IN THESE FIGURES ARE ALMOST 160,000 GALLONS OF DIESEL FUEL WHICH WERE WASTED AT GALLIPOLIS BY THE OHIO RIVER COMPANY IN 1981 BECAUSE OF THE IDLING OF TOWBOAT ENGINES DURING LOCK DELAYS.

THESE ARE NOT OUR ONLY COSTS ATTRIBUTABLE TO LOCK DELAYS. BECAUSE OTHER VESSELS IN OUR COMPANY'S OPERATING PATTERN DEPEND ON TIMELY COORDINATION WITH VESSELS COMING THROUGH GALLIPOLIS, EITHER UPBOUND OR DOWNBOUND, DELAYS AT GALLIPOLIS BUILD COSTLY OPERATIONAL INEFFICIENCIES INTO OUR TRAFFIC NETWORK.

ALL OF THE COSTS STATED ABOVE, IT MUST BE REMEMBERED, WERE INCURRED BY ONLY ONE COMPANY. IN ORDER TO GET A MORE ACCURATE PICTURE OF THE TOTAL COST OF DELAYS AT GALLIPOLIS ONE COULD TAKE THE DELAY COSTS INCURRED BY OUR COMPANY AND EXTRAPOLATE THOSE COSTS TO THE OTHER 82% OF THE TONNAGE MOVING THROUGH THE LOCKS DURING 1981. IT IS NOT DIFFICULT TO SEE THAT TOTAL INDUSTRY DELAY COSTS ARE SIGNIFICANT. ALSO, WITH PROJECTED TRAFFIC GROWTH ON THE OHIO, DELAY COSTS AT THE EXISTING STRUCTURE WILL INCREASE AS TRAFFIC INCREASES, CAUSING FURTHER ECONOMIC DISRUPTION. THESE COSTS CAN BE AVOIDED WITH A NEW STRUCTURE AT GALLIPOLIS.

DURING THE PRESENT ECONOMIC CRISIS IT IS WASTEFUL TO ALLOW A PRODUCTIVE, ENERGY EFFICIENT, AND LOW-COST METHOD OF TRANSPORTATION TO BECOME UNPRODUCTIVE, INEFFICIENT AND EXPENSIVE BECAUSE OF AN ANTIQUATED FACILITY. THE INCREASING DELAYS AT GALLIPOLIS CAN ONLY SERVE TO MAKE THE COSTS OF ENERGY AND BASIC COMMODITIES CONTINUE TO RISE THROUGHOUT THE OHIO VALLEY. THE OHIO VALLEY REGION, ALREADY HARD-PRESSED BY ECONOMIC DEPRESSION AND UNCONTROLLED UNEMPLOYMENT, CANNOT AFFORD THE CONTINUED BURDEN OF INCREASED TRANSPORTATION COSTS DUE TO THESE UNNECESSARY DELAYS. WE LOOK FORWARD TO A TIMELY REPLACEMENT OF THE EXISTING STRUCTURE.

MR. CHAIRMAN, I THANK-YOU FOR THE OPPORTUNITY TO SPEAK BEFORE YOUR COMMITTEE AND WOULD BE HAPPY TO ANSWER ANY QUESTIONS YOU OR ANY MEMBER OF THE COMMITTEE MIGHT HAVE.

STATEMENT OF JAMES FARLEY, REPRESENTING THE WATERWAYS ASSOCIATION OF PADUCAH, KENTUCKY

My name is James Farley. I am representing the Waterways Association of Paducah, Kentucky. My associates are Mrs. Judy Taylor and Mr. Gary Doom of Paducah. Our Association represents 18 towboat and barge operators who are vitally interested in the improvement of navigation conditions on the Lower Cumberland and Tennessee Rivers and the continued survival of our industry.

We are here to urge an appropriation of \$300,000 to expedite the study now underway by the Corps of Engineers to investigate the feasibility of improvement to the Lower Cumberland River below Barkley Dam or to otherwise resolve the traffic congestion problem at the Kentucky Dam on the Tennessee River.

This problem involves both the TVA Lock and Dam on the Tennessee River and the Barkley Lock and Dam on the Cumberland River. A canal connects the pools created by these two structures and was designed to permit alternative access from the Tennessee and Cumberland to the Ohio River and from the Ohio to each of these

tributaries. However, sharp bends in the Lower Cumberland impede navigation, a condition made worse by high current velocities created by releases from up-stream hydropower generations on the Cumberland. The consequence is that waterway carriers avoid the Barkley Lock in favor of the Kentucky Lock. This frequently results in a traffic backup at Kentucky Lock while the Barkley Lock remains under-utilized. This traffic delay costs the barge and towing industry hundreds of thousands of dollars and wastes millions of gallons of diesel fuel.

To relieve this situation consideration is being given to a project to straighten the Cumberland below the Barkley Lock. A longer range solution may be found in an enlargement of locking capacity at the Kentucky Lock on the Tennessee.

Whatever the final judgement of the Corps on these issues, the situation is so serious that we urge funding of the study in line with the full capability of the Corps for efficient use of funds to expedite the work to the maximum practicable extent and thus to advance the study by about two months.

Mr. Chairman, these are all of my prepared remarks. I would however like to say that our recommendations are based on our ability to be in operation in 1983. The Administration's proposed waterway user tax will more than likely force many members of our association out of business.

STATEMENT OF C. N. MCGARVEY, CHAIRMAN, A-C VALLEY CORP., EMLENTON, PA.

In regard to our discussions concerning the use of Freeport Terminals (as our shipping point to the Orient) for our currently proposed 1 million ton per year coal export order, I have noted on the television and the newspapers that there is some consideration being given to a reduction in the service hours for barge traffic on the Allegheny River. This is of major concern to us, not only because of the coal export, but because of our barge shipment of fuel oil/gasoline up the river to your terminal for distribution to our customers.

It seems to me that in order for us to quote on this coal export order, through the Port of New Orleans, via the Allegheny/Ohio River Barge route, we must have some assurance that this route will be economically available. Can you give us a status report as soon as possible.

Thank you.

STATEMENT OF ROBERT L. GRAY, MANAGER, MARINE SERVICES, ASHLAND
PETROLEUM CO., ASHLAND, KY.

Ashland Petroleum Company, a division of Ashland Oil, Inc., welcomes this opportunity to support the earliest possible replacement of the present locks structure. We urge approval of \$1,400,000 to complete the advanced planning and engineering, now in progress through the support of your committee, so that work on this vital project can continue without serious delay.

Ashland's Involvement

Ashland has been barging crude oil and petroleum products to and from our refineries for over 50 years, operating throughout the inland waterway system of the United States. Since 1925, our refinery on the Big Sandy River, near Catlettsburg, Kentucky, has grown from 300 barrels per day to a capacity of 220,000 barrels per day. Because 80% of this refinery's production is distributed by water, the replacement project for the Gallipolis Locks and Dam, just 37 miles upstream, is crucial to tows carrying energy products to industries in Ohio, West Virginia, and Pennsylvania. Each year we move in excess of 4 million tons of petroleum products through the present structure to more than 26 terminals and industries located above Gallipolis Locks and Dam.

The Gallipolis Bottleneck

The present obsolete structure is a time-delaying barrier to the Upper Ohio Valley for distribution of petroleum, coal, and other basic commodities. Delays are escalating steadily for the delivery of steel-making fuel, power plant turbine oil, and fuels for highway and railroad transportation. Also--of ever increasing importance--is the restriction placed on export coal shipments to the Gulf Coast and the related impact on the Nation's balance of payments.

It became obvious in the late '60's that barge traffic would eventually be blocked if river tonnage continued to follow the many projections developed. Tonnage has actually exceeded the projections. Studies were started then to plan for this eventuality, but over 20 years have passed without final approval. Now, even after congressional authorization and appropriations are secured, this urgently needed structure cannot be completed until 1989--at best. Traffic can expect delays exceeding 30 hours per trip before completion.

Ashland urges the earliest possible construction start to minimize these traffic delays and to reduce future construction costs for this project.

Impact of Delays

In the Summer of 1980, lock delays to all tows at Gallipolis were averaging from 6-24 hours per trip, adding an additional cost of \$2000-\$8000 for each 7-day round trip to Pittsburgh. There was a 16-day maintenance outage in November and December of 1980 for lock gate repairs in the 600' chamber, creating delays of 128 hours and adding \$40,000 to the cost of each trip. During this period, our company had 3 tows waiting--taking 128 hours to complete a lockage that normally takes 2 hours. There also were many other boats and hundreds of barges tied up at this same time.

In 1981, there were 7 accidents to the lock gates, only two of which have been repaired. A total of 29.9 days were lost because of these two repair outages. During the first outage, 56 tows were delayed while repairs were completed. The damage from the other 5 accidents

will be corrected when time and money permits or when it can be efficiently accomplished during an outage for maintenance.

The number of outages of the existing 600' lock chamber of Gallipolis will continue to increase due to age of the structure and to lock-gate damage resulting from the built-in navigation hazards encountered in both the upper and lower approaches to the lock. When the 600' chamber is out of service, normal double locking tows (approximately 1200' long) are required to break their tow 6 times to lock through the 360' chamber adding 10-12 hours delay to each trip through the lock.

Safety

Much has been said regarding the risks taken by the towboat crews due to the unsafe maneuvering conditions when making high-water, downbound approaches into the lock. We wish to describe this again for the record. A downbound tow is required to make a turn to the left, just above the approach to the lock chamber and while entering the lock approach, exposing the stern of the boat and tow to a strong outdraft current toward the dam and the opposite shore away from a safe approach. As a result of these conditions, accidents here involving breakup of the barge tows jeopardize the continued operation of the locks and dam and the stability of the pool above the dam. I am sure you are aware of a recent incident involving a tow breakup in the Monogahela River above Maxwell Lock and Dam, which resulted in a loss of the pool-- stopping navigation and affecting thousands of citizens who depend on this pool for water supplies.

Thank you for considering these comments. This Nation deserves a FIRST-CLASS WATERWAY SYSTEM. The Gallipolis bottleneck, located one-third (1/3) of the distance between Pittsburgh and the Lower Mississippi River and in between more efficient lock structures, must be replaced for the best interest of our Nation's economy. We need your continued support for this very worthwhile project.

OHIO WATER RESOURCE PROJECTS

Mr. Crow. Before calling our final witness, the statement which has been submitted by Mr. Melvin Rebholz, acting director of the Ohio State Department of Natural Resources will be made part of the record at this point. Also, a statement from DINAMO will be included.

[The statement follows:]

STATEMENT OF MELVIN J. REBHOLZ, ACTING DIRECTOR, OHIO DEPARTMENT OF
NATURAL RESOURCES

Mr. Chairman and members of the Subcommittee. My name is Melvin J. Rebholz. I am Acting Director of the Ohio Department of Natural Resources (acting on behalf of Dr. Robert W. Teater who is currently on a leave of absence). The testimony I am presenting represents the official position of the State of Ohio on the proposed FY '83 Budget of the Army Corps of Engineers.

As many of you are aware, the State of Ohio has an active cooperative program with the Corps on water resources development. As such, we take a very strong interest in the budgeting proposals which represent the federal commitment to our joint partnership.

After reviewing the President's proposed budget for FY '83, we noted a number of projects which in our judgment deserve this subcommittee's special attention. These projects are listed as follows:

Gallipolis Locks and Dam Modernization Project - \$1.4 million has been included in the proposed FY '83 budget for this extremely important project to continue with advanced engineering and design. We strongly recommend approval of the proposed funding.

Emsworth, Dashields and Montgomery Locks and Dam Study - The House Committee on Public Works and Transportation recently adopted a resolution to authorize a detailed study for possible improvements at the Emsworth, Dashields and Montgomery Locks and Dams on the Ohio River. The Corps has expressed a capability of \$200,000 to initiate the study in FY '83 under the Ohio River Mainstem Study. We strongly recommend that \$200,000 be added to the budget to enable the study to proceed.

Nelsonville Flood Control Project - We were extremely disappointed to learn that no funds were included in the FY '83 Budget to allow for continued advanced engineering and design work on the Nelsonville Flood Control Project. After several years of inaction, \$200,000 was included in the FY '82 Budget to initiate the engineering and design work on this project. The Corps is

currently underway in this effort. However, with no funding in the proposed '83 Budget to allow this work to continue, the Nelsonville project will again come to a halt. The people of Nelsonville and the Hocking Valley have been frustrated for years in their efforts to get this project moving. The flooding record at Nelsonville in this century shows at least ten major floods with four of those in the last twenty years, the latest in February 1979. The decision finally to include funding in the FY '82 Budget was a relief to the people and an expression of commitment on the part of the federal government. The subsequent decision not to fund the project in the FY '83 Budget bears close scrutiny by this subcommittee. We believe the project should be funded at a level commensurate with the Corps' capability, \$200,000.

Big Creek Metro Zoo Flood Control Project - Our further review of the budget for construction of flood control projects in Ohio indicates that at least \$100,000 is required in FY '83 to initiate utility relocation construction contract work for the Big Creek Project in the Cuyahoga River Basin so as to allow for timely continuation of the overall construction of that flood control project. Funds for Big Creek were not included in the President's FY '83 Budget because of the lack of a signed Local Cooperation Agreement. The Local Cooperation Agreement has now been signed allowing resumption of scheduled activities. The required \$100,000 can be taken from the budgeted amount of \$2,300,000 for the Point Place Flood Control Project without detriment to that project due to an anticipated minor delay of about one month in real estate acquisition activities. Local sponsors of the Point Place Flood Control Project are agreeable to such transfer of funds. In making this minor reallocation of funds, the overall funding for FY '83 for projects of this type in Ohio will remain unchanged while providing for timely action on both projects. Therefore, we recommend that the budget be adjusted to provide \$100,000 for the Big Creek project for the purpose stated above and reflect a reduction in the Point Place Project amount from \$2,300,000 to \$2,200,000.

Geneva-on-the-Lake Harbor of Refuge Project - Serious boating accidents resulting from Lake Erie storms have focused increased attention on the need to establish a refuge harbor at this location along Lake Erie. Currently no such harbor exists between Ashtabula and Fairport, a distance of approximately 35 miles. The State of Ohio is committed to providing 50% of the construction costs for the Geneva project as well as providing all necessary ancillary facilities. The FY '83 Budget includes \$50,000 towards completing the preconstruction planning for this project. However, the Corps has expressed a total capability of \$138,000. The additional \$88,000 would advance the preconstruction planning by approximately one year. The one year advancement is in reality the original target date set by the Corps when it began the preconstruction planning process. The project is vitally important to saving boater's lives and it enjoys our strong commitment as the non-federal sponsor. Accordingly, we urge you to provide the additional \$88,000 to the Corps budget to keep this project on schedule.

Western Lake Erie Shore (Maumee Bay Shore Protection) - The Maumee Bay Shore Protection Project, recommended under the Corps' Western Lake Erie Shore Survey Study is critical to the completion of Maumee Bay State Park. Our plans for development of the park include a lodge complex, cabins and other significant capital improvements. However, these highly desirable developments cannot proceed unless erosion protection from Lake Erie is provided. The FY '83 Budget includes no funding to advance the Maumee Bay Report (considered an interim report for the Western Lake Erie Shore Survey Study) past the normal review process. Consistent with guidelines established by the Office of the Chief of Engineers pertaining to completion of advanced engineering and design prior to project authorization, we respectfully request that necessary funding for advanced engineering and design work be appropriated by this subcommittee for the Maumee Bay Shore Protection Project.

Geneva Shore Erosion Protection Project - The Ohio Department of Natural Resources is working to establish an extensive state park facility at Geneva. A large bathing beach facility, including a bath house with expansive parking accommodations, was constructed in 1969. However, excessively high water levels at Lake Erie have jeopardized the existing development and eroded the beach. In addition, shore erosion, due in part to high lake levels, has stymied our proposed cabin developments. The need for erosion protection at this location has been well documented by the Corps in feasibility reports.

It is our desire to enlist the Corps assistance through authority granted by a resolution of the Senate Committee on Public Works on June 10, 1963. Such resolution refers to enabling legislation enacted by the Congress in Section 110 of Public Law 87-874, October 23, 1962. The Corps can initiate the survey study with specific reference towards addressing the erosion problem at Geneva State Park in FY '83 if funds are added to the proposed budget. We respectfully request that such funds be added to the Corps proposed FY '83 Budget for this purpose.

Port Clinton Jetties (Lake Erie) - We strongly urge the subcommittee to appropriate funds to the Corps of Engineers to repair the hazardous west and east jetties at Port Clinton on Lake Erie. These jetties protect the mouth of the Portage River which is an important harbor on Lake Erie. There are over 15 marinas, numerous charter boat operations, and 8 public boat ramp facilities on the Portage River which handle thousands of private boats each year. The Ohio Department of Natural Resources, Division of Wildlife estimates over 30,000 boat fishing trips utilized the Portage River in 1980.

The necessary repair would consist of rehabilitating the previously deteriorated stone cap on the west jetty. Without repairs the exposed core material is subject to erosion from wave action, and loss of sufficient core material will undermine

the structural integrity of the jetty.

Hazardous conditions currently exist at the east jetty because of the rubblemound stone cover. It is proposed that a level concrete walkway be built on the 1,000 foot structure.

The east jetty is used heavily by shore fishermen. Over 11,000 anglers utilize this facility every year. Many more would use it if it were not so hazardous. The City of Port Clinton has provided access to this facility and has constructed an adjacent parking lot.

The western basin of Lake Erie has become the "Walleye Capital of the World". In 1981 over 2.6 million walleyes and 10 million yellow perch were caught by sport fishermen in this western basin, as well as catfish, white bass, and other fish. The improved jetties would provide an excellent shore fishing facility and help meet our overall goal of increasing public access to Lake Erie.

STATEMENT OF BARRY PALMER, EXECUTIVE DIRECTOR, ASSOCIATION FOR THE DEVELOPMENT OF
INTERSTATE NAVIGABILITY ON THE ALLEGHENY, MONONGAHELA, AND OHIO (DINAMO)

My name is Barry Palmer, I am Executive Director of the Association for the Development of Interstate Navigability on the Allegheny, Monongahela and Ohio, herein called DINAMO. Our headquarters are in Pittsburgh, Pennsylvania.

Our specific recommendations are as follows:

GALLIPOLIS MODIFICATION	\$1.4 million for continuation of planning and engineering
MONONGAHELA-YOUGHIOGHENY RIVER BASIN COMPREHENSIVE STUDY	\$900,000, which is the reported capability of the Corps of Engineers, enabling an Interim Report on Locks and Dams #7 and Lock #8 to be completed by the February 1, 1984 target date.
KANAWHA RIVER NAVIGATION STUDIES	\$1 million for continued studies of the Winfield Lock and Dam Replacement.
OHIO RIVER MAIN STEM STUDY	\$1.9 million, the reported capability of the Corps of Engineers, to the end that any interim report on the Emsworth, Dashields and Montgomery Island projects can be completed without undue delay.

THE GALLIPOLIS LOCKS: This project has been formally reported by the Huntington District Engineer, and approved by the Ohio River Division Engineers and the Board of Engineers for Rivers and Harbors. The recent testimony of the Ohio River Division Engineer before this distinguished Subcommittee stated that the National Waterways Study has designated this project as one of two most severe bottlenecks on the nation's inland waterways, the other being Locks and Dam #26 on the Mississippi. Its benefit/cost ratio is reported by the Corps at 12.9 to 1. In the project as communicated in the February 1981 Report of the Huntington District Engineers, much work consists of rehabilitation of the existing dam and construction of a 1,200 foot lock, and a 600 foot auxiliary in a navigable pass, to conform project capability with navigation facilities extending hundreds of miles above and below the site and to eliminate extremely hazardous approach conditions.

Phase I preconstruction planning of the Gallipolis modification was authorized in 1976. For FY 1982, Congress appropriated \$1.6 million to continue construction planning and engineering. The amount budgeted for FY 1983, \$1.4 million will complete the preconstruction phase. This amount, therefore is essential to advance the project to the construction phase as soon as construction is authorized.

DINAMO will, of course, give its full support to such authorization at this session of Congress.

The constraints on traffic growth at Gallipolis are so severe that when traffic demand reaches 64.5 to 70.9 million tons in 1990, based upon estimates by independent experts presented in the District Engineer's Report of February 1981, about 15 million tons will be denied access. Average delay time, 8 hours per tow transit in 1979, will reach 32 hours (nearly a day and a half) when completion of the project can reasonably be expected. At that time, the costs of delay as estimated by industry sources will reach \$133 million in 1979 dollars, or \$252 million, assuming the inflation rate of only 6% a year. There are no feasible alternatives for the 15 million tons driven from the River. This volume will move, if at all, from other origins to other destinations, such as the western coal fields to the lower Mississippi, involving a loss to the Upper Ohio Valley economy in jobs and income.

The Gallipolis Locks and Dam improvement is the keystone structure in America's heartland for coal, steel, chemicals and jobs. Included as Attachment A is statistical economic information regarding Gallipolis traffic and its importance to nineteen (19) states. While most of the traffic originates and terminates in the four states of Ohio, West Virginia, Pennsylvania and Kentucky, nineteen states in all originated or received cargo via Gallipolis in that year, 20% originating in Texas and Louisiana and the remainder from origins and destinations from Minnesota to the north, to Florida to the south and throughout much of the mid-continent. This is truly a project of national scope. Enlargement of its capacity is a matter of high national priority.

EMSWORTH, DASHIELDS AND MONTGOMERY ISLAND LOCKS AND DAMS: These three locks, located near the head of the Ohio River near Pittsburgh, Pennsylvania, typify the problem of many locks and dams in the Upper Ohio River Basin navigation system. First, they are old and deteriorating. These facilities vary in age from 45 years at Montgomery to 60 years at Emsworth. Because of their age and use, each of these three locks is requiring increased maintenance. Secondly, commercial traffic currently averages more than 20 million tons annually at locks that are undersized when compared to other locks on the Ohio River. Emsworth, Dashields, and Montgomery Island Locks have main lock

chambers 600 feet long x 110 feet wide, with auxiliary lock chambers 360 feet long x 56 feet wide. Main lock chambers on comparable Ohio River projects are 1,200 feet long x 110 feet wide, with auxiliary lock chambers 600 feet long x 110 feet wide. Lockages have averaged more than 10,000 annually over the past 10 years at these facilities. Delays have been encountered at each structure and have increased over the years to the point that the average delay for all tows in 1980 was 86 minutes for Emsworth, 59 minutes for Dashields, and 88 minutes for Montgomery. Considering the increasing rate of delays that are being encountered in the Upper Ohio River (related to the unusually high number of lockages in proportion to the tonnage processed), this figure could be ten-fold by the early 1990's.

The population of the area of project influence is approximately 2,300,000 with 4% or 85,000 being employed in the primary metal industry and its related manufacturers located along the river. Additionally, this area has and will continue to be an important link in the transportation network for energy related raw materials being shipped to the coal fired steam plants throughout the Greater Pittsburgh area and the Upper Ohio River Valley.

With the unanimous approval by the full House Public Works and Transportation Committee on March 11, 1982 for a resolution authorizing modernization studies for these three facilities, it is now imperative that this distinguished Subcommittee approve \$1.9 million, the reported capability of the Corps of Engineers, to the end that any interim report on the Emsworth, Dashields and Montgomery Island projects can be completed without undue delay.

MONONGAHELA-YOUGHIOGHENY RIVER BASIN COMPREHENSIVE STUDY: DINAMO fully supports the navigation studies relating to the future improvement of Locks and Dams #7 and #8 on the Monongahela River. It was recognized as far back as 1964 that Locks and Dams #7 and #8 would have capacity constraints and inconsistencies in locks sizes, and studies were begun at that time. In 1973, the projects were approved for replacement.

by the Secretary of the Army, but subsequent changes in federal procedures have eliminated the previously obtained approval, causing a regression in the status of the project.

Funding of \$900,000, which is the reported capability of the Corps of Engineers, will enable an Interim Report on Locks and Dams #7 and Lock #8 to be completed by the February 1, 1984 target date. Funding of this study is essential in getting our region back on the track with respect to the future viability of coal development in Southwestern Pennsylvania and Northeastern West Virginia.

KANAWHA RIVER NAVIGATION STUDIES: On the Kanawha River, all the locks and dams are obsolete by today's standards. The average age of 49 years and the inadequate size of the present structure make improvement necessary. The Winfield Lock and Dam, for example, located closest to the mouth, will have to be upgraded in the very near future if the Kanawha is to accommodate the anticipated increases in volume.

Thank you, Mr. Chairman, for your kind consideration for which we are most deeply grateful.

O'NEILL UNIT, NEBRASKA—OPPOSITION

STATEMENT OF TED HOFFMAN, NEBRASKA CHAPTER, SIERRA CLUB

Mr. CROW. Mr. Ted Hoffman, the Nebraska Chapter of the Sierra Club.

Mr. HOFFMAN. My name is Ted Hoffman, and I am testifying in opposition to the O'Neill unit in north-central Nebraska. I have three points to make:

REPAYMENT OF PROJECT COSTS

One is the way the project is to be repaid. Witnesses, in testimony before this committee last year, have stated that 95 percent of the project was to be repaid to the U.S. Treasury. This is not exactly correct. The project is not scheduled to be repaid before the middle of the next century. In the meantime, the Federal Government is paying 12 to 13 percent interest on the money it borrows to repay the project. I certainly would like to see, when public officials are giving public information, that they tell it like it is.

GROUND WATER RECHARGE BENEFITS

My second point is although the O'Neill unit was not authorized for ground water recharge, the Bureau is now claiming that 22,000 acres will be recharged to the benefit of those landowners. There is no way that they can recover this advantage to these landowners. That is one point.

The other is that the Bureau is very reluctant to talk about another problem: We have three projects in Nebraska now that there is \$3.8 million in the fiscal 1983 budget to continue work on preventing water losses. One project is losing 42 acre-feet per mile of lateral. The city of St. Paul, Nebr., is being flooded by ground water from another.

The O'Neill project has 462 miles of canals and laterals that traverse sandy and gravely terrain. The chances are excellent that they are going to have similar problems. As I mentioned, the Bureau is reluctant to talk about it.

I think the Bureau should say one of two things—either "No," they are not going to have a problem; or if they do anticipate a problem, what the magnitude of it is and the cost and the cost that should be added to the cost of the project instead of waiting for 10 or 15 years down the road and then coming back to Congress for an appropriation to correct this situation.

The third point I would like to make is that we have a use-it-or-lose-it syndrome in Nebraska that refers that the water that runs out of the State is lost, is wasted. If we could build the O'Neill and all the dams that could be built in Nebraska, we are still only talking about a few hundred thousand acre-feet. If we used the conservation methods, we could save, we could utilize many, many times the amount of water they could save by damming it up.

There is 86 million acre-feet of water that falls on Nebraska in the form of precipitation. About 35 million acres of this is lost in evaporation. There is 71 million in evaporation transportation that is lost back to the atmosphere; that is about 82 percent of Nebraska's water budget, but about 35 million of that is actually evaporation. We can cut that. We can save, by these methods, according to the university experiment stations, up to 4 million acre-feet of water.

This not only has the added advantage of stopping soil erosion; it is cheaper to the farmers, and it cuts their energy costs and it cuts their labor costs.

There is another 3 million acre-feet that can be saved by irrigation scheduling, but this area is being cut, cut back.

I know that this committee has—this is out of their jurisdiction. However, I would like to recommend that Congress reevaluate where we should spend our money and where we can better use conservation methods and preserve the land for many lifetimes to come in our food-producing capacity.

This is the—I am sure that if this would be done, that future generations would thank you.

Thank you.

ENVIRONMENTAL PROBLEMS

Mr. CROW. Thank you for your testimony.

You spoke of environmental problems and an issue of water conservation. In your personal view, are there other environmental problems with the project?

Mr. HOFFMAN. Yes; they are lengthy. I mentioned the sand and gravel sub-base. They are going to have—it is believed by our side that there will be tremendous problems on supplying water during the critical growing season because it is not like—it is not soil that holds water readily. So, during the critical growing season with the corn, they have to keep at least a third of an inch of water on that corn daily.

They can't water one week and then come back and water it the next week. There is certainly environmental losses in the reservoir area.

It is referred to by the nature conservationists as the ecological crossroads of the Nation where the canyon has been eroded out of the high plains.

They have six different species of plants there. That is the only place they found them closely together like that in the Nation. There are many others which this would be a loss.

Another factor is that the increase of our food supply would be practically minimal. It is less than 1 percent.

The area of 77,000 acres is less than 1 percent of our 20 million acres of cropland in Nebraska.

PREPARED STATEMENTS

Mr. CROW. Thank you very much for your testimony. The subcommittee has also received several other prepared statements in opposition to this project. If there is no objection, those statements will be inserted in the record at this point.

Mr. HOFFMAN. Yes, sir. Thank you.

[The statements follow:]

STATEMENT OF TED HOFFMAN, REPRESENTING THE NEBRASKA CHAPTER OF THE SIERRA CLUB

I am Ted Hoffman representing the Nebraska Chapter of the Sierra Club, testifying today in opposition to the O'Neill Unit. I am excited about an alternative proposal that I am going to suggest to you and that in my judgement, would be a much sounder investment for taxpayer's dollars. Despite what is said about 95 percent of the project being repaid, no one in this room would borrow money at 12 or 13 percent interest, then turn around and loan it for 60 or 70 years at no interest. But, this is exactly what you are asking the taxpayers to do by asking them to invest \$4,500 an acre in land taht is valued at less than \$1,000 per acre. And the increase in food production would be insignificant when compared with total output in Nebraska.

Although the O'Neill Unit was not authorized for the purpose of providing groundwater recharge, proponents are referring to it as a major benefit. With 362 miles of canals and lateral through sandy and gravely terain, water losses could very well have detremental effects, although, the bureau seems reluctant to talk about it.

The 1983 budget includes \$3.8 million for three existing Nebraska irrigation projects for continued work to prevent water losses. The Frenchman Cambridge project was losing 42 acre-feet per mile of lateral before correction work began. The city of St. Paul, Nebraska is being flooded by rising underground water from the Farrwell Project.

There is a "use it or lose it syndrome" in Nebraska that infers that water running out of the state is wasted. By building the O'Neill and all other dams that could possibly be built in Nebraska we are talking in terms of impounding a few hundred thousand acre-feet of water. We are talking in terms of utilizing millions of acre-feet by using proper conservation methods.

About 86 million acre-feet of water in the form of precipitation falls on Nebraska every year. About 71 million acre-feet, or 82 percent of Nebraska's water budget is lost through evapotranspiration. Transpiration of moisture by plants can be changed very little, but evaporation can be significantly reduced. Evaporation loss can be between 10 and 50 percent of the total depending on the vegetation cover. The greatest losses occur in row crops.

Personnel at the University of Nebraska, North Platte Experiment Station believe that, by using eco-fallow, a form of minimum tillage, they can retain a minimum of 2½ inches of moisture per acre over and above the next best method of tilling the soil. 2½ inches of moisture translates into 4 million acre-feet of available moisture for Nebraska's 20 million acres under cultivation.

Experiments have shown that by proper irrigation scheduling, the use of water can by cut 5 to 8 inches. This translates into a saving of more than 3 million acre-feet for Nebraska's 7 million acres of irrigated cropland.

The added attraction of minimum tillage and irriagtion scheduling is that it preserves soil as well as water and saves the farmer fuel and labor costs. There are other promising developments in the works such as snow management, microclimate modification, alternative crops and improved cutltural practivees.

The problem is, that funds for researching and promoting these conservation methods are being cut back. My proposal to you the United States Congress, is that you de-emphasize water impoundments that have relatively small impact on increased

food production and benefits a selected few individuals and put our money into soil and water conservation measures that will preserve our food producing capacity for many lifetimes to come and benefit the entire farm community. Future generations will thank you.

On the Niobrara River, this would have the added advantage of preventing the biological crossroads of America and the Crown Jewel of Nebraska from being buried forever under water, and perhaps, on the Platte River, the door to the critical and unique North American Central flyway will remain open.

STATEMENT OF THE NATURE CONSERVANCY, NEBRASKA

The Nature Conservancy is a private conservation organization committed to the preservation of natural diversity. Incorporated in 1951, we now have approximately 100,000 members. Since our first project in 1954, we have been responsible for the preservation of 1,845,982 acres of natural areas. In late 1980, we exercised options to purchase approximately 54,000 acres along the Niobrara River in north-central Nebraska, an area which is now known as the Niobrara Valley Preserve. A significant portion of this preserve is threatened by the proposed Norden Dam and Reservoir of the O'Neill Project.

This portion of the Niobrara River Valley is an area of unusually rich and complex ecological diversity. The Niobrara is a young river which is still rapidly cutting a deep canyon through an area of complex and diverse soils. This results in a unique topographic diversity which has created a wide array of microclimates in the river valley. These microclimatic variations support a series of ecological communities that can only be described as incredible.

The Niobrara Valley in the vicinity of the proposed Norden Dam and Reservoir contains at least 13 distinct ecological communities existing in close conjunction with one another. Eight of these are "major" community types that contain plants and animals of biogeographic significance--plants and animals that assist us in interpreting the natural history of the world as we now find it. Four of these major community types are grasslands and four are woodlands.

The most extensive grasslands are the sandhill prairies which carpet the deep, rolling sands south of the river. The Niobrara River is a sharp line of demarcation between the sandhills to the south and prairies of heavier soils to the north. Fertile alluvial soils of the river's floodplain support remnant stands of tallgrass prairie. The silty pleistocene terraces above the valley floor are covered with a little bluestem prairie, while the gentle slopes on the north side of the river and the heavier soils of the Crookston Table above are vegetated with a mixed prairie. Small inclusions of short-grass prairies occur on shallow soils throughout the valley.

The deeply eroded canyons on the north side of the river contain an important eastward extension of Rocky Mountain Ponderosa Pine forest. North-facing slopes and low alluvial benches south of the river support the western-most extension of eastern deciduous forest: a complex community containing black walnut, basswood (or linden), green ash, hackberry, dogwood, hop hornbeam and other woody species typical of forests farther to the east. The floodplain of the river on the north side is covered with a typical Great Plains gallery forest with an overstory of bur oak, cottonwood and juniper. Springbranch canyons on the south wall harbor the most unique of the forest types: a northern boreal forest association dominated by paper birch (disjunct here by over 200 miles from the nearest adjacent populations in Minnesota and the Black Hills of South Dakota).

The Niobrara Valley in this region is the known distributional limit for 190 plant species of biogeographical significance. At least 111 species of the eastern deciduous forest (or its margins) reach their westernmost limit here.

Seventy-five of these are forest or shade-tolerant plants which would be eliminated by the pool of the proposed reservoir. Forty-nine species of plants are at their eastern or southern distributional limits in this part of the valley. Another 30 species of primarily southwestern species are also at their distributional limits here. In addition, we have identified 11 pairs of eastern and western plant species which co-occur here and which undoubtedly hybridize naturally. It is precisely this stretch of the Niobrara Valley proposed for inundation that is the zone of greatest overlap between eastern and western botanical elements. The complex is further enriched by the presence of the northern boreal forest elements in the birch communities (approximately 70 percent of which would be inundated or destroyed). The greatest portion of the plants that are of biogeographic significance occur below the pool level of the proposed reservoir.

This intermixing of eastern, western and northern elements is not confined to plants; it is reflected in the composition and dynamics of the animal communities in the valley, as well. Flickers (red-shafted and yellow-shafted), orioles (Baltimore and Bullock's), wood peewees (eastern and western), grosbeaks (rose-breasted and black-headed) and buntings (indigo and lazuli) have all been shown to hybridize naturally in this stretch of the valley. In each case, an eastern and a western species separated throughout the rest of their ranges by the treeless Great Plains filter down the forested corridor of the Niobrara Valley and nest adjacent to one another. The inevitable hybridization of some individuals creates what is essentially an undescribed experiment in the mechanics of species isolation.

The same pattern is repeated in other life forms. Ten species of eastern reptiles and amphibians (3 of which are considered biogeographic indicator species) reach their westernmost limit here and 5 western species (2 of which are biogeographic indicator species) reach their eastern limits. The Niobrara Valley is also an important corridor and meeting place for eastern and western taxa of insects, both aquatic and terrestrial. It is an important overlap area for moths and butterflies, many of which are poorly known and little-studied.

The Niobrara Valley is also an important refugium for species which existed on the Great Plains during recent glaciations and which help us to understand the dynamics of plant and animal responses to major climatic changes. The existence of paper birch communities in the valley is due entirely to the presence of the rapidly eroding river adjacent to the permeable Valentine sands. The sandhills south of the river catch and infiltrate virtually all of the precipitation which falls on them. Where the river has cut down through this sand "sponge" and the underlying impermeable substrata, springs emerge from the canyon walls. In areas where there are old gravels or poorly consolidated sediments, the springs erode south into the sandhills, creating springbranch canyons. These are protected from the direct rays of the summer sun and cooled by the continual flows of spring water, creating cool moist islands in the arid prairies. It is in these mesic sites that we find remnants of communities that were common all over the Great Plains during the last two ice ages. Their existence is now confined to this 30-mile stretch of the Niobrara River.

Another example of such an ice age relic is a distinct subspecies of eastern woodrat (*Neotoma floridana bailevi*), a creature so unique that its very presence in the valley is regarded as scientific evidence of a holocene refugium for late-pleistocene species in the Niobrara Valley. Yet another case involves clones of aspen that have been known to exist in the vicinity of Smith Falls for more than 90 years. These have been misidentified as quaking aspen, but our recent work has revealed that they are in reality an F-1 hybrid between the quaking aspen of the Rocky Mountains and the bigtooth aspen of the upper Great Lakes states and Canada. Neither of the parent plants is now known to occur in the valley, but both must have occurred there at one time. Each time we go to the field to study our preserve, we uncover more of these "ecological mysteries", underlining the crucial need to preserve the ecological complexity of the valley.

That portion of the valley proposed for inundation is precisely that portion which contains the greatest overlap of ecological communities and the most complex ecological interactions. The springbranch canyons with their paper birch forests do not occur west of Valentine and they are poorly repre-

sented on the Fort Niobrara National Wildlife Refuge to the west of the preserve. Likewise, there are no springbranch canyons east of Hazel Creek on the eastern end of the preserve. The eastern deciduous forest elements begin to fade in the vicinity of the Brown/Cherry county line and there are only a few scattered groves west of this point, none of which contain the full complex of overstory, midstory and understory species. Although Ponderosa pine extends east of the preserve, the broader, shallower river valley east is much more impacted by human activity and there are few, if any places where quality examples of both forest types exist in close conjunction to one another. It is ironic that the very geological and topographical diversity which creates this unique ecological diversity are the same features which have attracted water development interests looking for an impoundment site.

It is clear from the limited studies that have been undertaken by the staff of The Nature Conservancy and our cooperating scientists from several agencies and institutions that the Niobrara Valley Preserve is truly the "biological crossroads of North America". It is an area not only of statewide significance, but of national and international significance, as well. It is an unparalleled natural laboratory which cannot be duplicated at any research facility and which has not been duplicated by nature. Inundation by the proposed Norden Dam and Reservoir would remove the heart of this unique ecological complex, leaving America bereft of an irreplaceable part of her natural heritage.

STATEMENT OF PHILIP J. JAMES, CHAIRMAN, NEBRASKA WATER
CONSERVATION COUNCIL

MY NAME IS PHIL JAMES. I RESIDE IN DODGE COUNTY, NEBRASKA, AND I AM CHAIRMAN OF THE NEBRASKA WATER CONSERVATION COUNCIL, A GROUP WHICH HAS BEEN FORMED TO SEEK CONGRESSIONAL DEAUTHORIZATION OF THE NORDEN DAM.

THERE ARE MANY NEBRASKA ORGANIZATIONS WHICH HAVE BEEN FORMED TO SEEK DEAUTHORIZATION OF THE NORDEN DAM, BUT OUR PARTICULAR MISSION IS TO GO DIRECTLY TO THE PEOPLE OF NEBRASKA WITH THE FACTS ABOUT THE O'NEILL UNIT. WE FEEL THAT THE CITIZENS OF OUR STATE HAVE NOT BEEN PROVIDED WITH ACCURATE, TIMELY INFORMATION ON THE COST OF THE PROJECT, ITS ENVIRONMENTAL EFFECTS, OR THE EFFECTS ON LANDOWNERS DOWNSTREAM. THE NEBRASKA WATER CONSERVATION COUNCIL IS TAKING THE FACTS TO NEBRASKANS, AND WE ARE DOING IT BY TALKING TO PEOPLE INDIVIDUALLY AT THEIR DOORS.

SINCE EARLY DECEMBER, WE HAVE PERSONALLY CONTACTED OVER THIRTY-TWO THOUSAND HOUSEHOLDS. OUR INITIAL EFFORTS HAVE BEEN IN LINCOLN, OMAHA, AND BEATRICE, NEBRASKA. OUR PLANS CALL FOR PERSONALLY CONTACTING AS MANY NEBRASKA CITIZENS AS TIME AND FUNDING PERMIT. WE ARE ENCOURAGED IN OUR EARLY EFFORTS, AS THEY INDICATE THAT WHEN NEBRASKANS ARE INFORMED ABOUT THE COSTS AND ENVIRONMENTAL IMPACTS OF THE O'NEILL UNIT, THEY ARE OPPOSED. IN FACT, OVER 53% OF THE THIRTY-TWO THOUSAND HOUSEHOLDS CONTACTED HAVE INDICATED THEIR FULL SUPPORT BY SIGNING THE FOLLOWING STATEMENT:

"I SUPPORT THE NEBRASKA WATER CONSERVATION COUNCIL IN ITS EFFORTS TO STOP THE NORDEN DAM PROJECT. IN THIS AGE OF CUTBACKS IN SOCIAL PROGRAMS AND RISING CONCERN ABOUT WASTEFUL GOVERNMENT SPENDING, THE INVESTMENT OF MILLIONS OF TAXPAYER DOLLARS IN A 'PORK BARREL' PROJECT IS UNCONSCIONABLE. MY CONTRIBUTION TO

NWCC WILL BE USED TO SPREAD THE WORD ABOUT THE BOONDOGGLE, AND STOP IT BEFORE IT IS BUILT!"

THAT IS A STRONG STATEMENT!! I RESPECTFULLY SUBMIT THAT OVER SIXTEEN THOUSAND NEBRASKA CITIZENS WOULD HAVE TO HAVE STRONG SENTIMENTS ON THE SUBJECT BEFORE THEY SIGNED SUCH A STATEMENT AT THEIR DOORSTEP. WE HAVE ALSO FOUND THAT LESS THAN 5% OF THE HOUSEHOLDS CONTACTED ACTIVELY SUPPORT THE O'NEILL NORDEN DAM.

I THINK IT IS FAIR TO SAY THAT IF A MAJORITY OF NEBRASKA CITIZENS, ONCE PRESENTED WITH THE FACTS, ARE OPPOSED TO A FEDERALLY FUNDED PROJECT WITHIN THEIR OWN STATE, THEN SOMETHING IS FUNDAMENTALLY WRONG WITH THE PROPOSED PROJECT.

IT SEEMS LUDICROUS DURING TIMES THAT DEMAND FISCAL RESTRAINT THAT THE FEDERAL GOVERNMENT WOULD WANT TO SPEND AN UNREALISTICALLY ESTIMATED \$368 MILLION DOLLARS TO CONSTRUCT A PROJECT IN AN AREA WHERE A CONSIDERABLE PORTION OF THE CITIZENRY IS EXPRESSING THEIR CONCERNS WHETHER THE BENEFITS OF SUCH A PROJECT BEAR ANY REASONABLE RELATIONSHIP TO THE COSTS.

OUR ORGANIZATION, THE NEBRASKA WATER CONSERVATION COUNCIL, CONSISTS OF, AND IS SUPPORTED BY, INDIVIDUALS FROM ACROSS NEBRASKA. THEY ARE FARMERS, RANCHERS, CONSERVATIONALISTS, AND CONCERNED CITIZENS.

AS MENTIONED, THE GOAL WE SHARE IS IMMEDIATE DEAUTHORIZATION OF THE NORDEN DAM. BY ANY STANDARDS - ECONOMIC, ENVIRONMENTAL, OR AGRICULTURAL - IT IS AN UNWORTHY PROJECT.

STATEMENT OF ED JAKSHA, PRESIDENT, NEBRASKA TAX LIMIT COALITION

I AM ED JAKSHA FROM OMAHA, NEBRASKA. I SPEAK FOR MYSELF, AS PRESIDENT OF THE NEBRASKA TAX LIMIT COALITION WHICH IS A STATEWIDE ORGANIZATION OF CITIZENS AND TAXPAYERS. I ALSO SPEAK FOR AN ORGANIZATION OF RANCHERS AND FARMERS WHO LIVE IN THE NIobrARA RIVER VALLEY AREA--SOME WITH HOMESTEADS DATING TO THE LAND GRANT DAYS--THESE PEOPLE DEPEND UPON THE FLOW OF WATER IN THE NIobrARA AND THE GROUND WATER IT GENERATES.

I APPEARED BEFORE YOUR COMMITTEE LAST YEAR FOR THE SAME PURPOSE. THAT IS, TO STATE OPPOSITION TO THE FUNDING AND CONSTRUCTION OF NORDEN DAM---IN THE PAST YEAR NEBRASKA CITIZENS HAVE DEBATED THE MATTER PRIVATELY AND IN PUBLIC--AND A MAJORITY ARE CONSISTENTLY REAFFIRMING THEIR OPPOSITION TO THE NORDEN DAM PROJECT.

THAT MAJORITY OF OPPOSITION HAS BEEN INDICATED BY AN OPINION POLL BY THE OMAHA WORLD HERALD LATE IN 1980. THAT HAS BEEN AFFIRMED BY PUBLIC OPINION SURVEYS OF THOUSANDS OF CITIZENS IN THE AREA OF LINCOLN, WHICH IS THE CAPITOL CITY OF NEBRASKA. THAT OPINION IS REINFORCED BY MANY PERSONS WHO REGULARLY OFFER THAT OPINION IN LETTERS TO THE EDITORS--BY LETTERS AND FINANCIAL SUPPORT TO OUR ORGANIZATIONS--AND CURRENTLY THERE ARE RANDOM SURVEYS IN PROCESS IN MAJOR COMMUNITIES OF NEBRASKA---THE RESULTS ARE CONSISTENT---

I AM HERE TO CONVEY THAT MESSAGE:

---DENY FURTHER FUNDING OF NORDEN

---DEAUTHORIZE THE NORDEN DAM PROJECT

I DO NOT CLAIM TO BE A PROFESSIONAL EXPERT ON FINANCIAL MATTERS--NOR DO I HAVE A DEGREE IN GOVERNMENT AFFAIRS OR ECONOMICS

BUT FOR 50 YEARS OF ADULT LIFE, I HAVE KEPT A BALANCED CHECK BOOK--AND I HAVE MANAGED TO HAVE A RESERVE IN THE SAVINGS ACCOUNT.

THAT IS MORE THAN THE FEDERAL GOVERNMENT HAS BEEN ABLE TO DO.

I RESPECTFULLY ASK--WOULD YOU OPERATE YOUR OWN BUSINESS--OR YOUR WHEAT FARM--THE WAY GOVERNMENT OPERATES?

I WILL ASSUME THAT YOUR ANSWER WOULD BE NO--A NUMBER OF FARMERS IN NEBRASKA, SOME IN THE 3RD CONGRESSIONAL DISTRICT ARE NOT PAYING ANY FEDERAL INCOME TAXES BECAUSE OF NO PROFIT--IN AN ECONOMY THAT IS LARGELY AFFECTED BY ECONOMIC POLICIES OF OUR NATIONAL GOVERNMENT THAT PLAYS GAMES WITH "FUNNY MONEY"--AND WANTS ME TO BELIEVE THAT I CAN HAVE "INSTANT EVERYTHING" INCLUDING NORDEN DAM---BUT LET CHILDREN THAT ARE YET UNBORN PICK UP THE TAB FOR THE ECONOMIC FOLLIES OF THEIR FATHERS AND GRANDFATHERS.

NORDEN IS AN EXAMPLE OF SPENDING DECISIONS WHICH I BELIEVE ARE THE CAUSE OF AN UNREASONABLE FEDERAL DEBT--WITH THE ASSOCIATED INTEREST CHARGES--WHICH IS RESPONSIBLE FOR THE PROBLEMS YOU FACE IN CONTROLLING TAX SPENDING AND SOLVING THE FEDERAL BUDGET DEFICIT--WHICH CAN ADD TO THE FEDERAL DEBT AND

THE ASSOCIATED INTEREST CHARGES, WHICH WILL COMPOUND THE FEDERAL DEFICIT PROBLEM.

THE BLM PROJECT ESTIMATE FOR 1982 PLACES COST OF NORDEN AT \$368 000 000 THAT ASSUMES COST TODAY--AND BLM HAS REPEATEDLY REFUSED TO SPECULATE ON COSTS BEYOND TODAY.

THE PROJECT, IF STARTED TODAY, WOULD BE COMPLETED IN 11 OR 12 YEARS. CERTAINLY, THE ACTUAL COST THEN WOULD BE MORE THAN \$368 000 000. IN FACT, THE BLM ESTIMATES THEMSELVES HAVE TRIPLED IN THE PAST SEVEN YEAR--AND THE ESTIMATE IN THE LAST SINGLE YEAR HAS GONE UP ABOUT 92% WITH THAT SCENARIO AS A POINT OF REFERENCE--IT IS REASONABLE TO CONCLUDE THAT THE COST IN THE SCHEDULED CONSTRUCTION PERIOD OF 11 OR 12 YEARS WILL AT LEAST TRIPLE BY 1993.

YOUR AGREEMENT TO APPROVE NORDEN--WOULD BE AN AGREEMENT TO ADD AT LEAST \$1 000 000 000 TO THE FEDERAL DEBT--FOR NORDEN ALONE--BY 1993---ADDED TO THAT WOULD BE THE INTEREST CHARGES OF ABOUT \$130 000 000 A YEAR---WITH NOTHING TO BE PAID ON THE PRINCIPAL UNTIL AFTER THE DAM IS COMPLETE AND THAT WOULD BE AFTER THE YEAR 2000. OF ALL THAT SUM, THE BENEFICIARY OWNERS OF 77000 ACRES IN THE O'NEILL IRRIGATION DISTRICT WOULD PAY BACK ONLY \$45 000 000 BETWEEN YEARS 2003 AND 2053--AT NO INTEREST. THIS, FOR LAND THAT IS ALREADY IRRIGATED TO ITS PRESENT ECONOMIC LEVELS TO PRODUCE CORN THAT IS COSTING A DOLLAR A BUSHEL MORE THAN THE MARKET WILL PAY.

NORDEN DOES NOT MAKE ECONOMIC SENSE--IT WILL ONLY ADD TO THE ECONOMIC PROBLEMS OF THIS GREAT COUNTRY. TO APPROVE NORDEN/O'NEILL WILL ONLY PROVE THAT GOVERNMENT DOES NOT HAVE A PROBLEM--IT IS THE PROBLEM.

I REPEAT MY PLEA TO YOU--ON BEHALF OF MANY WORRIED TAXPAYERS--

--DENY FURTHER FUNDING FOR NORDEN

--DEAUTHORIZE THE PRESENT NORDEN PROJECT. THE CONSERVATION OF WATER IS NECESSARY--BUT A SOUND ECONOMY, AND COMMON SENSE IN GOVERNMENT BOOKKEEPING IS ALSO NECESSARY. I SUGGEST THAT IF WE CANNOT PAY FOR IT--WE CANNOT AFFORD IT. BORROWING MONEY TO PAY FOR NORDEN WOULD BE CONCLUSIVE EVIDENCE THAT WE CANNOT AFFORD NORDEN--PERHAPS MANY OTHER PROJECTS.

OBT CALCULATIONS, NORDEN DAM (O'NEILL-PICK SLOAN); E A JAKSHA 2/14/82
BLM COST ESTIMATES, INCREASE AND COST COMPARISONS, AND PROJECTED INCREASES
PROJECT COST ESTIMATES BY BLM, FOR YEARS 1974, 1980, 1981, 1982

1974, 1980
15525000, 230182000

1981, 1982
35270000, 368746000
INCREASES IN COST ESTIMATES

1974-80, 1974-81, 1974-82, 1981-82
 DOLLAR INCREASE- 80 OVER 74, 81 OVER 74
 114657000 219745000
 DOLLAR INCREASE-82 OVER 74, 82 OVER 81
 253221000 33476000
 PERCENT INCREASE FOR SAME PERIODS

1.99248648 2.90214239
 3.19191517 1.09984788

PROJECT TO IRRIGATE 77000 ACRES; OVER 30000 OTHER ACRES WILL BE TAKEN OUT OF PRODUCTION FOR CANALS TO DELIVER WATER BY GRAVITY TO THE DISTRICT; ABOUT HALF OF THE 77000 ALREADY IRRIG BY PIVOTS-THE REST MAY BE MARGINAL
 THE MARKET PRICE OF THE SUBJECT LAND TO BE IRRIGATED (?) RANGES AROUND \$1000 PER ACRE
 THE COST OF NORDEN RELATED TO THE 77000 ACRES CONSTITUTES A TAXPAYER PAID IMPROVEMENT FOR PRIVATELY OWNED LAND

THE AVERAGE TAX PAID IMPROVEMENT PER ACRE--IN 1974=\$1398, IN 1981=\$4130, IN 1982=\$4788

THE SIGNERS TO THE O'NEILL IRRIGATION DISTRICT HAVE CONTRACTED TO REPAY \$45245000 OF THE COST OF THE PROJECT, OVER A PERIOD OF 50 YEARS, AT NO INTEREST

--THIS IS ABOUT 12.2% OF THE CURRENT COST ESTIMATE

PAYMENTS WILL BEGIN WHEN WATER IS AVAILABLE, WHICH MAY BE 10 YEARS AFTER CONSTRUCTION START; ASSUME 1993

THE BALANCE OF THE COST WILL BE PAID FROM ELECTRIC POWER REVENUES PAID TO THE PIC-SLOAN MISSOURI RIVER HYDROELECTRIC PLANTS, WHICH REVENUES ARE COMMITTED, UNCERTAIN AND MAY NOT BEGIN UNTIL AFTER YEAR 2050

IN CONSIDERING THE ULTIMATE COST OF NORDEN IN THIS CALCULATION USE THE FOLLOWING ASSUMPTIONS:

THE ESTIMATED COST OF NORDEN CURRENTLY (81-82), IS ABOUT 3 TIMES THAT IN 1974; IN ONE YEAR, 82 OVER 81, IT HAS GONE UP ABOUT 9%
 THE CONSTRUCTION PERIOD IS ABOUT 10 YEARS;

IF THE COST HAS RISEN 3 TIMES IN 7 YEARS (74-81), AND IF THE COST HAS RISEN 9% IN ONE YEAR

--IT IS REASONABLE TO ASSUME A SIMILAR RISE IN THE NEXT TEN YEARS. THIS ASSUMPTION CAN BE EXTENDED AS CONTRIBUTING FACTORS TO THE PROBLEMS OF FEDERAL DEBT AND NATIONAL INFLATION

WHICH IS \$1 106 238 000 (ONE HUNDRED A BILLION DOLLARS)

THE U S TREASURY WILL BORROW MONEY FOR THIS PROJECT; MONEY BORROWED BY THE GOVERNMENT COMPETES IN THE MONEY MARKET WITH PROFIT MAKING TAXPAYERS;
 INCREASING INTEREST ON INCREASING DEBT AGGRAVATES THE FEDERAL DEFICIT; ADDED BORROWING INCREASES THE FEDERAL DEBT

THE BLM COST ESTIMATE USES AN ARCHAIC, UNREALISTIC DISCOUNT RATE OF 3 1/4%;
 --DISCOUNT RATES IN THE RANGE OF 8.5% TO 10.5% WOULD NEARER THE RANGE OF REALITY
 MARKET MONEY RATES RANGE FROM A DISCOUNT RATE OF 12% TO OVER 16% PRIME

FOR EASE OF CALCULATION ASSUME THE COST OF BORROWED MONEY AT THE RATE OF 10%
 A PORTION OF THE COST OF THE PROJECT WILL HAVE BEEN PAID DURING THE CONSTRUCTION PERIOD SO ASSUME THE REMAINING BALANCE PAID BY BORROWED FUNDS AT \$350000000

FOR THE FIRST 10 YEARS THE BENEFICIARY IRRIGATION DISTRICT MAKES NO PAYMENTS, THEREFORE THE BALANCE REMAINS CONSTANT; AT THE RATE OF 10%, THE INTEREST IS \$35000000 EACH YEAR, WHICH ADDS UP TO \$350000000 IN THE 10 YEAR PERIOD.

THIS EQUALS THE ORIGINAL AMOUNT OF THE BORROWED MONEY, AND BEFORE PAYMENTS BEGIN THE PRINCIPAL AND ACCUMULATED INTEREST EQUAL \$700000000

BEGINNING WITH YEAR 2004 AND FOR 50 YEARS THROUGH YEAR 2053, IRRIG DISTRICT PAYMENTS ARE SCHEDULED AT \$900000 EACH YEAR. THESE PAYMENTS RESULT IN A DECLINING BALANCE TO \$305000000 AT THE END OF YEAR 2053; THE INTEREST ON THE BALANCE WILL DECLINE. THE BALANCE OF \$305000000 IS SCHEDULED TO BE REPAID BY PICK-SLOAN POWER REVENUES; THAT POSSIBILITY IS QUESTIONED. THE FOLLOWING TABLES LIST THE DECLINING BALANCE FOR 50 YEARS; AND THE INTEREST ON THE BALANCE FOR EACH YEAR. THE INTEREST IS AN OBLIGATION ON THE FEDERAL BUDGET.

DECL BALANCE,	ANNUAL INT
500000000	35000000
491000000	34910000
482000000	34820000
473000000	34730000
464000000	34640000
455000000	34550000
446000000	34460000
437000000	34370000
428000000	34280000
419000000	34190000
410000000	34100000
401000000	34010000
392000000	33920000
383000000	33830000
374000000	33740000
365000000	33650000
356000000	33560000
347000000	33470000
338000000	33380000
329000000	33290000
320000000	33200000
311000000	33110000
302000000	33020000
293000000	32930000
284000000	32840000
275000000	32750000
266000000	32660000
257000000	32570000
248000000	32480000
239000000	32390000
230000000	32300000

1993-2003 - Accumulated Interest

\$ 350 000 000

2003-2053 - Interest on declining balance 600 000 000 (+/-)

2053 - Principal to be picked up by Pick-Sloan revenues 305 000 000

Balance due 2053 2 255 000 000

Proden may be silted and use limited by 2053

by 2053 the taxpayer born in 1993 will be 60 years old.

ADDITIONAL PREPARED STATEMENTS

Mr. CROW. The subcommittee has also received prepared statements from the Sheyenne Valley Association and the Port Authority of New York and New Jersey, which cover matters of particular interest to them. Those statements will be made part of the record at this point. [The statements follow:]

JOINT STATEMENT OF ANTHONY J. TOZZOLI, DIRECTOR, PORT DEPARTMENT, PORT AUTHORITY OF NEW YORK AND NEW JERSEY, AND LINDA W. SEALE, COMMISSIONER OF PORTS AND TERMINALS, NEW YORK, N.Y.

Representing also:

Maritime & Port Organizations

Board of Commissioners of Pilots of the State of New Jersey
International Longshoremen's Association
Local 333, United Marine Division - ILA, AFL-CIO
Maritime Association of the Port of New York
Maritime Port Council of Greater New York and Vicinity
New York City Council of Port Development and Promotion
New York-New Jersey Port Promotion Association
New York Shipping Association
New York Towboat and Harbor Carriers Association
Save Our Port Coalition
United New Jersey Sandy Hook Pilots Benevolent Association
United New York Sandy Hook Pilots Benevolent Association

Civic Organizations

Brooklyn Chamber of Commerce
Chamber of Commerce of the Borough of Queens
City of Newark (N.J.)
Commerce and Industry Association of Northern New Jersey
Department of Environmental Protection, State of New Jersey
Greater Newark Chamber of Commerce (N.J.)
Hudson County Chamber of Commerce and Industry (N.J.)
New Jersey Alliance for Action
New Jersey Citizens Transportation Council
New Jersey State Chamber of Commerce
New York Board of Trade
New York Chamber of Commerce and Industry
Somerset County Economic Development Office (N.J.)
Staten Island Chamber of Commerce
Union County Chamber of Commerce (N.J.)
Union County Planning Board (N.J.)
West Side Association of Commerce in the City of New York, Inc.

I am Anthony J. Tozzoli, Director, Port Department, of the Port Authority of New York and New Jersey. I am joined by Commissioner Linda W. Seale of the City of New York Department of Ports and Terminals. Together we share the responsibility of also representing the 29 port, maritime, and civic interests listed on the cover of this statement in urging that Federal funds be appropriated in Fiscal Year 1983 for essential navigation and related projects in the Port of New York and New Jersey under the jurisdiction of the Civil Works Program of the U. S. Army Corps of Engineers. We appreciate the opportunity to present our views and recommendations on these matters to the distinguished members of this Subcommittee.

The Port Authority is very mindful of the nation's critical fiscal and economic conditions that face the Federal Government. While the budget issues are related to the mechanical questions of the project authorization and user fee legislation, one shouldn't interfere with Congressional consideration of the other.

The Corps of Engineers budget for Fiscal Year 1983 draws a very direct link between maintenance funding and user fee legislation. The budget documents note that \$150 million was not included in the President's budget for Operation and Maintenance (O & M) work on "low priority" channels and waterways. The promise of a supplemental request for that amount is raised should user fee legislation be enacted.

While the reductions did not appear to directly affect channels in the Port of New York and New Jersey, I feel compelled to register a strong objection to the tactic employed. It is the view of the Port Authority that the maintenance and continued operation of our commercial navigation channels should not be a pawn in a larger policy question currently under debate in Congress. If Congress ultimately redefines our national navigation policy through some form of reform and user fee legislation, then the subsequent funding should reflect that change. But not until that policy is, in fact, altered.

I should note with gratification the responses to the budget reduction which I have heard attributed to the Chairman and others in Congress. Your support for our navigation system has always been appreciated.

This period of policy uncertainty tends to complicate the project appropriations process, yet the needs of ports such as New York and New Jersey, as gateways for the nation's waterborne commerce, go on. Given these conflicting economic, political, and commercial demands, the appropriation agenda which Commissioner Seale and I will hereinafter present to you constitutes the basic minimum which is needed for the Port of New York and New Jersey. We know that you will do your best to meet this agenda in the context of the many other difficult decisions that face you in how to best serve the national interest.

Summary of Recommendations

Port of New York and New Jersey interests recommend an additional appropriation of \$5,063,000 in Federal funds in Fiscal Year 1983 allocated among five authorized Federal navigation projects. The Federal Budget allotment for these projects is \$6,137,000. Our statement will show for the record the project recommendations of local interests, which I will therefore omit in the interest of time.

Funding Recommendation

<u>Project</u>	<u>Federal Budget</u>	<u>Local Interests</u>
<u>Study Category</u>		
Arthur Kill Channel, Howland Hook Marine Terminal, N.Y.	\$ 187,000	\$ 250,000
New York Harbor and Adjacent Channels, N.Y. & N.J.	1,750,000	4,000,000
<u>Construction Category</u>		
Kill Van Kull and Newark Bay Channels, N.Y. & N.J.	None	250,000

Maintenance Category

Newark Bay, Hackensack, and Passaic Rivers, N.J.	4,200,000	5,200,000
Raritan River, N.J.	None	1,500,000

The remainder of our statement will elaborate on the listed projects.

New York Harbor and Adjacent Channels, NY & NJ

The New York Harbor and Adjacent Channels study is the result of the Corps of Engineers combining the New York Harbor, Claremont Terminal Study authorized by a House Committee on Public Works' resolution adopted July 10, 1968, and the New York Harbor, Ambrose Anchorage Channels Study authorized by a December 5, 1980, resolution of the Senate Committee on Environment and Public Works. The purpose of this study is to determine the feasibility of modifying, including enlargement and deepening, of the existing 45-foot deep Federal Ambrose and Anchorage Channels, and the privately maintained 24-foot deep Claremont and 35-foot Port Jersey Channels for commercial deep draft navigation. The Ambrose and Anchorage Channels function as the main access channel to the Port of New York and New Jersey. The study will include consideration of providing up to a 60-foot depth within the Ambrose and Anchorage Channels, and the construction of an access channel therefrom to a site between Claremont and Port Jersey selected for construction of a coal terminal. Consideration will also be given to a further deepening of the Ambrose Channel to 68-70 feet to support the development of a major crude oil ocean tanker unloading facility at Stapleton, Staten Island, New York.

The Port Authority and City of New York are studying the feasibility of constructing one or more modern coal facilities to transload 10 million to 20 million tons of steam coal in the Port of New York and New Jersey for export and domestic markets. Potentially feasible sites for development of major coal handling facilities are Port Jersey, the Greenville Yards in Jersey City, and Stapleton, Staten Island. To insure that land will be available for the coal terminal, the Port Authority recently acquired 452 acres of land in Port Jersey and Greenville at a price of about \$12.2 million. The Department of Ports and Terminals-City of New York, is studying development of the Stapleton coal facility which includes a coal slurry system. In conjunction with the City coal terminal, the Port Authority is examining the feasibility of constructing a crude oil handling terminal at Stapleton. This proposed facility would accept Very Large Crude Carriers (VLCC's) of about 260,000 deadweight tons (dwt) transporting crude petroleum from the Arabian Gulf and would require deepening part of Ambrose Channel to 68 feet. The terminal presently envisioned would provide delivery of crude oil via pipeline across Staten Island to the refineries of Exxon in Linden, and Chevron in Perth Amboy, New Jersey. This terminal would vastly simplify the present crude oil delivery system in the Harbor and generate both economic and environmental benefits.

However, for any U.S. port to capture a share of the international coal market, deep channel and facility construction must begin within the next three years. Thus, speed is essential if both the U.S. coal mining industry and New York-New Jersey region is to capture a meaningful share of the international coal trade. Long-term contracts with coal and oil interests are critical to the development of our proposed terminals. We require timely decisions on the proposed channel deepening project in concert with the terminal construction process.

The Fiscal Year 1983 Federal Budget allots \$1,750,000 for the Corps to complete its comprehensive Stage 1 Reconnaissance Report, Plan of Study and initiate Stage 2 level environmental, economic, and engineering studies. However, the urgency of the channel deepening improvement requires that the study be completed in one year. We, therefore, strongly urge a total of \$4,000,000 be provided to assure that the Corps Survey Report and Environmental Impact Statement (EIS) be completed in Fiscal Year 1983.

Kill Van Kull and Newark Bay Channels

On July 14, 1972, a critically needed study of a deepening and selective widening of the Kill Van Kull and Newark Bay Channels was authorized by resolution of the House Committee on Public Works. This Federal waterway functions primarily as an access channel to the general cargo-container terminals at Elizabeth and Port Newark on Newark Bay, as well as oil terminals on the Kill Van Kull. The 2,200-acre Port Newark and Elizabeth seaport complex, a \$400 million development with an annual payroll in excess of \$108 million, handled more than 13.1 million tons of cargo in 1981.

On December 14, 1981, the Secretary of the Army transmitted the Corps of Engineers Feasibility study for such navigation channel improvements to Congress for authorization as a construction project. This Survey Report recommends deepening the existing 35-foot channel to 45 feet below mean low water and for the easing of selected channel bends. The Plan of improvement has an impressive benefit-cost ratio of 7:1 and is the Corps' National Economic Development Plan and Least Environmental Damaging Plan.

No funds are included in the Federal Budget for this project. Construction authorization is expected this year, and Port interests are anxious to avoid further delays in this now ten-year-old study. Therefore, we urge that a pre-authorization appropriation of \$250,000 be provided in Fiscal Year 1983 for advanced engineering and design work.

Newark Bay, Hackensack, and Passaic Rivers, New Jersey

The Newark Bay, Hackensack, and Passaic Rivers, New Jersey, project provides the main channel access to the Port Newark and Elizabeth seaport complex which handles more than 70 percent of the Port of New York and New Jersey's general cargo. While the Federal Budget provides \$4,200,000 for maintenance dredging work in the Newark Bay main channel and the 30-foot section of the Passaic River Channel, an additional appropriation may be required to dredge shoaling at the site of the former Central Railroad of New Jersey Newark Bay Bridge.

The bridge crosses the main channel serving this seaport area and is being removed by the U.S. Coast Guard as an obstruction to navigation. This summer, after removal of the bridge's center island, we expect to find sections of the Federal navigation project, formerly covered by the island structure and thus not accessible to past maintenance dredging, to be at depths less than the authorized 35-foot project depth. Hydrographic surveys of the area can only be undertaken upon completion of the bridge removal project. However, should shoaling be found, no funds are available for maintenance dredging. This would not only seriously detract from the navigational purposes to be served by removal of the bridge, but would impede the safe and efficient full use of the Federal channel by shipping.

The Federal Budget contains only \$4,200,000 for this maintenance project, which would not be enough to dredge the bridge area. We, therefore, strongly urge a total of \$5,200,000 or \$1,000,000 more than budgeted, be provided in Fiscal Year 1983 for such additional dredging.

Raritan River, New Jersey

A Corps of Engineers' Hydrographic Survey of the Raritan River project determined that the South Channel authorized project depth of 15 feet below mean low water has shoaled to less than 9 feet. This area of the Raritan River Project serves the Middlesex County Sewerage Authority Plant, Sayreville, New Jersey. Maintenance dredging of this project is required for the economical loading of barges. Presently, the more than 200 tug-barge movements annually can only navigate the South Channel at high tide with less than full barge loads.

Full barge loading could reduce transportation costs to New Jersey taxpayers by an estimated \$1,000,000 annually. While the Federal Budget provides no funds for this project, channel surveys indicate that \$1,500,000 would restore the authorized project depth in this channel. We, therefore, urge an appropriation of \$1,500,000 in Fiscal Year 1983.

While I have not mentioned the total budgeted funds for other budgeted maintenance projects, we urge that these be retained. Port operations require timely maintenance dredging of Federal navigation projects for the Port to efficiently serve the nation. Reduced Federal maintenance of channels impacts not only Department of Defense vessels and military cargoes but seriously affects the economic viability of trade and commerce. We, therefore, strongly urge your support of recommended Budget maintenance appropriations levels as contained in the Fiscal Year 1983 Budget for the Port of New York and New Jersey. I will now ask Commissioner Seale to elaborate on the balance of our funding recommendations for other Federal navigation projects in the Port.

* * * * *

Thank you, Mr. Tozzoli. I am Linda W. Seale, Commissioner of Ports and Terminals, City of New York. I wish to add my appreciation for extending to me the privilege of conveying to you the joint recommendations of the City of New York and the Port Authority for Federal navigation projects in the Port of New York and New Jersey. Before I discuss the other navigation projects in our Region's recommendations, I want wholeheartedly to endorse the funding requests expressed by Mr. Tozzoli, in particular, the \$4,000,000 appropriation necessary for the Corps of Engineers to complete New York Harbor and Adjacent Channels, New York and New Jersey study projects. The City has contracted with Tibbetts-Abbett-McCarthy-Stratton to conduct detailed engineering and environmental studies of the City's coarse coal slurry terminal concept. However, a critical issue that must be addressed along with capital investment and long-term terminal commitments for the City's proposed terminal is a timely determination of the feasibility of constructing a deepwater navigation channel to the proposed facility. Therefore, an appropriation of \$4,000,000 to complete the study will provide us with the opportunity to construct an efficient coal terminal so the Port can continue to make a significant contribution to the national economy.

Arthur Kill Channel, Howland Hook Marine Terminal, New York

I would like to discuss one additional concern of ours: the Arthur Kill Channel, Howland Hook Marine Terminal project. This study was authorized by a House Committee on Public Works and Transportation resolution on May 9, 1979. The purpose of this study is to determine the feasibility of deepening and widening the existing Federal navigation project--"New York and New Jersey Channels"--from deep water in Upper New York Bay westward to the New York City Howland Hook Marine Terminal, Staten Island, and to provide a vessel turning basin to serve this facility. The Howland Hook Terminal is a \$100 million, 200-acre facility that due to today's modern and planned container vessels is served by insufficient channel depths, widths, and alignment. Present channel dimensions present hazardous navigation conditions for vessels and are delaying the planned expansion of the terminal to 500 acres.

The Corps of Engineers reconnaissance report completed during August 1981 for this study project established interest in extending channel deepening beyond the Howland Hook Terminal to accommodate the Exxon Bayway, Linden, New Jersey, and Gulf Oil, Staten Island, terminal facilities. Channel deepening to these facilities would reduce the requirement to lighten tankers at crowded harbor anchorages, thus reducing transportation costs, collisions, and environmental damage. The extended study area and engineering, environmental, and economic studies require more time and funds than we had initially anticipated, thereby increasing total study cost from about \$350,000 to \$650,000. We had planned on completion of the Corps study by January 1984 vs. the present scheduled completion of June 1985.

In short, this project requires \$250,000 in Federal funds in Fiscal Year 1983 to maintain the original scheduled study completion date of January 1984. However, the Federal Budget contains only \$187,000. We, therefore, strongly urge that a total of \$250,000 be provided.

I want to conclude our joint presentation by assuring you that wherever possible we have kept our appropriation requests as low as possible. For a port that generates some \$1.5 billion in Customs revenues annually, we consider our request for an additional appropriation of only \$5,063,000 in Federal funds for Fiscal Year 1983 not inconsistent with your efforts to reduce Federal expenditures. We hope that this distinguished Subcommittee will agree with the careful thought we have given to our Federal navigation project needs in the development of a low-cost, but high-yield program by appropriating in full all the individual sums we recommended.

Thank you.

STATEMENT OF LEAH ROGNE, SECRETARY, SHEYENNE VALLEY ASSOCIATION

One of the goals of the Sheyenne Valley Association, an organization of farmers and ranchers active in flood-control planning on the Sheyenne River in North Dakota, has been to support the development of a rational approach to flood control. We remain committed to that goal and have sent representatives over the past six years to Washington to testify to the congressional appropriations hearings, requesting funding to help provide relief to those persons threatened by serious flooding.

In the flood control decision making process we need to decide: what damages we can prevent; what we can ameliorate; and what we simply cannot change. We must expect that a certain amount of flooding is inevitable. Having accepted that, we must determine our priorities. We believe it is clear that the order of priorities in our largely rural area should be: human life, then homes and farmsteads and, lastly, farmland.

We are pleased that the Kindred Dam is finally no longer under consideration as a solution to lower Sheyenne River flooding problems. We have long said that the dream of the Kindred Dam, always in the back of some people's minds as the only solution, has prevented people from taking a hard look at other solutions and from making a commitment to any other possibilities.

It is now clear that the Kindred Dam is neither the most economic solution, nor the one most socially or environmentally acceptable. The evidence to support that lies within the U.S. Army Corps of Engineers, St. Paul District, documents, and it is now the position the Corps itself has taken. It is not just the strong public outcry against the dam which killed it--it is the nature of the project itself that did so.

We are in general support of the Corps' flood control plan. The proposed system of diversions and levees in the reach from Horace to north of West Fargo clearly meets the priority of protecting life and property in the primarily urbanized flood prone areas. The main focus of any plan for the lower Sheyenne River must be the West Fargo area. The West Fargo Diversion would do the job as well as any other possible solution and does it most economically, an extremely important factor in these times of federal budget cuts and general "belt tightening."

We are very enthusiastic about the concept of ring levees to protect rural dwellings and farmsteads from flooding in the reach from Kindred to the mouth of the Sheyenne. This is especially important for those people north of West Fargo who have a serious flooding problem resulting from the confluence of the Red, Sheyenne, Maple, Rush and Buffalo Rivers. We have been asking for well over a year for some answer on the question of federal funding support for these ringdikes and have testified in Congress asking for quick action on any legislation that would be required to allow federal cost-sharing in these projects. Ringdikes would actually save the government money, since they are very inexpensive and do the job that have been previously done through very expensive large dams and reservoirs.

Control of drainage is considered essential to the project. We would like to see more creative experimentation and follow-up documentation and analysis on the part of the Corps of Engineers and local water management districts on this issue. There is much talk about control of drainage as a panacea to flooding problems, but it should be noted that there are so incredibly many variables involved with drainage that simply gating every drain is not necessarily a solution to flooding. The watershed districts in Minnesota which have been actively working on gating drains don't know if they are doing any good. They don't know whether they've held water back on the land only to be forced to release it at a peak period time on the mainstem. In order to get a handle on this problem, a pilot project should be instituted to monitor and experiment on a small watershed so that a general computer model could be developed to aid with planning.

Flood plain management is another important facet of the overall flood control plan. More accountability needs to be demanded of local county, city and township planning boards to assure that this goal is met. Perhaps this would require further legislation.

We do not support the plan component involving a raise in the flood-pool level of Lake Ashtabula. We have no objection to the rebuilding of Baldhill Dam (which forms Lake Ashtabula) if that is required to bring the dam up to present safety standards, as has been intimated by the Corps. Throughout the planning process

there was never shown a level of support from Valley City and Lisbon, the areas most directly to benefit from this plan component, to justify such a disruptive solution. This part of the plan does not meet the planning objective of placing adverse impacts in the benefit areas, and it requires the acquisition of land for a larger flood pool area and for wildlife mitigation from areas not to be benefited. We believe the proposed plan gives an acceptable level of protection without the raise in Lake Ashtabula. The increased storage could give the Corps some freedom to "play around" with the operation of the reservoir; however, the only effect may end up being that the flood gates would be opened a few days later than would be the case with the present reservoir, and the flow downstream could end up being similar. We would rather support revised management of the reservoir without a raise.

SUBCOMMITTEE RECESS

Mr. CROW. The subcommittee will stand in recess until 10 a.m. tomorrow when it will meet in room 1114.

[Whereupon, at 4:45 p.m. Wednesday, March 31, the subcommittee was recessed to reconvene at 10 a.m. April 1.]

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS FOR FISCAL YEAR 1983

THURSDAY, APRIL 1, 1982

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10:08 a.m. in room 1114, Everett McKinley Dirksen Senate Office Building, Hon. Thad Cochran presiding.

Present: Senators Hatfield, Cochran, Johnston, Stennis, and Bumpers.

NONDEPARTMENTAL WITNESSES

CENTRAL ARIZONA PROJECT

STATEMENT OF HON. BRUCE BABBITT, GOVERNOR OF ARIZONA

ACCOMPANIED BY WESLEY E. STEINER, DIRECTOR, ARIZONA DEPARTMENT OF WATER RESOURCES

Senator COCHRAN. The subcommittee will please come to order.

I want to welcome all of you here this morning. We have Gov. Bruce Babbitt from Arizona with us to give the subcommittee the benefit of his thoughts and views about our Central Arizona Project. Senators Goldwater and DeConcini both send their welcome and regards, but because of other conflicts, they are unable to be present this morning.

Governor, we want you to make whatever oral statement you would like to make to the subcommittee. We have a copy of your full statement which we will make a part of the record.

We encourage you to summarize or make any highlight comments that you would like to make at this point. We welcome you to the subcommittee.

Governor BABBITT. Mr. Chairman, thank you very much. It is a pleasure to appear before this subcommittee and have a Mississippi twosome, if you will, in attendance. I must say we look eastward at the Father of Waters flowing through your State with a covetous eye at times. [Laughter.]

But if we can just get the Colorado River developed, we will stay home. We are very grateful for this opportunity to be here.

Mr. Chairman, let me just very briefly summarize my written statement. The Central Arizona Project is coming to fruition. It has been a long, long struggle, going clear back to the days of Carl Hayden in these halls, beginning back in 1912.

STATUS OF CONSTRUCTION

The central aqueduct, which will bring the Colorado River water 200 miles into Phoenix and then 100 miles uphill into Tucson, is progressing nicely. The Granite Reef Aqueduct, a 200-mile-long canal into Phoenix, is now entirely constructed or under contract. The balance of the system southward, beyond the Gila River, toward Tucson, is partially under construction. The environmental impact statements are finally being prepared for the final leg in Tucson.

FUNDING REQUEST

The President's recommendation this year is for the sum of \$160 million, which we recognize to be a substantial commitment in light of the realities of this particular year. We would point out that in order to complete the project on schedule—that is, by 1989—it would require level funding of about \$250 million a year. So we are opening a rather large gap above and beyond the original construction schedule.

I point that out to the committee just to emphasize that we are a long ways from absolute completion. We would like the committee to carefully assess the Bureau's construction capacity on a yearly basis and to recognize that we have to continue to press to get this project completed. It won't be complete until it gets to Tucson. Tucson is the largest city in the world without one drop of surface water—an extraordinary situation. This is literally a lifeline to urban Arizona. We, of course, appreciate your help in getting it completed.

DISTRIBUTION SYSTEM LOANS

There are a couple of specific items that I would like to touch upon. One is this issue of the construction of the agricultural distribution systems. The importance of this is that the price that Arizona agreed to pay for the Central Arizona Project was a statewide water plan, which meant getting off of the ground water table, adopting a ground water level, conserving our supplies, and a commitment to substitute surface water for overdrafted ground water supplies.

Now, that is tremendously important for agriculture in central Arizona. Pumps have been on now for 50 years. We must make this transition to part of the Arizona water management plan.

We need about \$100 million, probably more in light of inflation, for loans to build the agricultural irrigation distribution systems—the \$100 million is authorized for this work. Last year this committee and the Congress authorized \$2 million. This year the President did not forward a request for additional funding for the distribution systems. We have a request for \$17 million to proceed with construction of those systems. It is simply not a complete, functioning project without the loans to the agricultural industry to get the arteries to put the water on the land.

I would ask your careful consideration of this item. It is a modest item, but it is one of extreme importance in order to have a finished working project.

ORME DAM

There is one area of controversy that I am very pleased to report to you has been resolved. For the last 5 years, as I have testified before this subcommittee, we have discussed the issue of the Orme Dam. It was a feature of the project slightly above Phoenix. The dam was to have provided both flood control and regulatory storage for off-season pumping.

Orme Dam became, as is not infrequently the case, the subject of intense controversy among some of the valley Indian tribes, environmentalists, and others. We sat down with the help of the Bureau of Reclamation and the Secretary of the Interior a couple of years ago and recanvassed all of the alternatives. A year ago, we reached unanimous agreement to delete the Orme Dam from the project plan and to substitute a new regulatory structure at a site called New Waddell to the west and to combine with that some reconstruction of existing dams built under the old Newlands Reclamation Act as far back as 1910. It will involve some modification, some reconstruction of existing structures, and the location of a new structure.

But the important thing is the Bureau of Reclamation, the Secretary, the Arizona congressional delegation, the Indians, environmentalists, farmers, city folks, and myself are all in unanimous agreement as to the best course of action for Arizona.

ARIZONA FLOOD CONTROL PROJECTS

Finally, the President has very helpfully acceded to and included our request for an appropriation to the Corps of Engineers for continuing flood control projects across the balance of Arizona. The request is in the sum of \$12 million. It will mean continuing work for a variety of very important projects throughout Arizona.

Mr. Chairman, I must emphasize that there is a certain irony in coming from the desert and on one hand saying we are thirsty, we must develop water projects, and on the other hand speaking of flood control. The facts of life in western deserts are that it doesn't rain very often, but when it does, it can rain with tremendous torrential force. Arizona has perhaps had more flooding problems than any western State in the last decade. That, if you will, is the thumbnail sketch of what is behind that request.

Let me say again we are extremely grateful for the efforts of this committee, all of its members, over the years. Arizona would literally dry up and blow away without this project. Cities like Tucson have no surface water at all. The future of our State is mortgaged on the completion of this project. It is a dream that has been on the mind of every Arizonan for a century. It is now coming to reality. We are extremely grateful for your support and your efforts in bringing it to completion. Thank you, Mr. Chairman.

Senator COCHRAN. Thank you, Governor, for being here and providing the subcommittee with your statement on the Central Arizona Project.

Senator Stennis, do you have any comments?

Senator STENNIS. I just want to say, hang in there, Governor, and keep fighting. I remember when this project was in the balance here. There is a lot of faith put in you people. That is what it finally came down to, faith in the people of Arizona, you know, in authorizing the project to start with.

I am happy to see you carrying on, and within the limits of what we have to deal with, you will certainly fare with me and continue to.

Governor BABBITT. Senator, I appreciate that. We no longer have Carl Hayden to carry us on from decade to decade, but we still have Senator John Stennis. We are very grateful for that.

Senator STENNIS. Much success to you.

Senator COCHRAN. Thank you very much. Thank you for being here.

Governor BABBITT. Thank you, Mr. Chairman.

[The statements follow:]

STATEMENT OF GOV. BRUCE BABBITT OF ARIZONA

THIS IS MY FIFTH APPEARANCE BEFORE THIS COMMITTEE AS GOVERNOR OF ARIZONA TO SUPPORT FUNDING FOR THE CENTRAL ARIZONA PROJECT (CAP).

SINCE CONSTRUCTION OF CAP BEGAN IN 1972, THIS COMMITTEE AND CONGRESS HAVE CONTINUOUSLY PROVIDED FUNDING FOR THE PROJECT AT A LEVEL CONSISTENT WITH THE STATED WORK CAPABILITIES OF THE BUREAU OF RECLAMATION. DESPITE THE FACT THAT CAP WILL NOT BE COMPLETED THIS YEAR, AS ORIGINALLY FORECAST, I AM PLEASED WITH THE PROGRESS THAT THIS LEVEL OF FUNDING HAS MADE POSSIBLE TO DATE.

AT PRESENT, THE ENTIRE LENGTH OF THE GRANITE REEF AQUEDUCT SYSTEM HAS EITHER BEEN COMPLETED OR IS UNDER CONTRACT. WORK ON THE FIFTY-EIGHT MILE LONG SALT - GILA AQUEDUCT WHICH EXTENDS FROM THE TERMINUS OF THE GRANITE REEF AQUEDUCT TO A POINT NEAR PICACHO RESERVOIR IN PINAL COUNTY, IS WELL UNDERWAY. A DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR PHASE A OF THE TUCSON AQUEDUCT HAS BEEN FILED.

WE ARE RAPIDLY APPROACHING THE DAY WHEN CAP WILL BEGIN ROUTING ARIZONA'S PRECIOUS ENTITLEMENT OF COLORADO RIVER WATER TO OUR CITIES, INDIAN COMMUNITIES, FARMS, AND FACTORIES, THUS ENDING OUR DANGEROUS DEPENDENCE ON FINITE GROUNDWATER RESOURCES. WHAT BEGAN AS A DREAM NEARLY A CENTURY AGO WILL SOON BE A REALITY. ALL ARIZONANS LOOK FORWARD TO THE BEGINNING OF CAP WATER DELIVERIES IN 1985, AND FULL DELIVERIES BY THE END OF THE DECADE.

THE ADMINISTRATION'S 1983 BUDGET INCLUDES AN APPROPRIATION OF \$160,990,000 FOR CONTINUED CONSTRUCTION OF CAP. HOWEVER, IT IS ESTIMATED THAT AN ANNUAL FUNDING LEVEL OF \$250 MILLION OVER FIVE YEARS WILL BE NEEDED TO ASSURE DELIVERY OF CAP WATER TO TUCSON BY THE SCHEDULED DATE IN 1989. WITH THIS IN MIND, I WOULD URGE YOU TO CONTINUE THE PRACTICE OF MAKING APPROPRIATIONS COMMENSURATE WITH THE BUREAU OF RECLAMATION'S FULL WORK CAPABILITIES. IF THAT CAPABILITY IS GREATER THAN THE ADMINISTRATION'S BUDGET

REQUEST, I ASK YOUR FAVORABLE CONSIDERATION OF THE HIGHER FIGURE SO THAT WATER CAN BE DELIVERED AND REPAYMENT INITIATED AS SCHEDULED.

IN THE FACE OF YAWNING BUDGET DEFICITS, I APPRECIATE THE NEED TO CLOSELY SCRUTINIZE ALL EXPENDITURES. BUT, I ENCOURAGE YOU TO TAKE THE LONG VIEW OF THE BUDGET PROCESS. CERTAIN INVESTMENTS WHICH ARE NOT MADE TODAY WILL ONLY END UP COSTING MORE IF LEFT TO TOMORROW. WE HAVE ALREADY EXPERIENCED SIGNIFICANT COST INCREASES ON CAP RESULTING FROM DELAYS. FURTHER CONSTRUCTION DELAYS WILL INEVITABLY BE TRANSLATED INTO A HIGHER PRICETAG FOR BOTH THE FEDERAL GOVERNMENT AND THE PROJECT BENEFICIARIES WHO MUST REPAY THE REIMBURSABLE COSTS. I BELIEVE IT TO BE IN THE INTEREST OF ALL PARTIES TO CONCLUDE CONSTRUCTION OF THE PROJECT AS RAPIDLY AS POSSIBLE.

WE MUST ALSO BEGIN TO MAKE PLANS FOR DISTRIBUTION OF CAP WATER AS SOON AS IT BECOMES AVAILABLE. FORECASTS SHOW THAT RUNOFF IN THE COLORADO RIVER BASIN WILL BE FAR ABOVE NORMAL THIS YEAR. PROSPECTS ARE EXCELLENT THAT THE RIVER'S RESERVOIRS WILL BE NEARLY FULL WHEN CAP STARTS ACCEPTING WATER IN 1985.

THE COLORADO RIVER BASIN PROJECT ACT OF 1968, (P.L. 90-537), WHICH AUTHORIZED CAP, INCLUDED AN AUTHORIZATION OF \$100,000 MILLION FOR CONSTRUCTION OF NON-INDIAN DISTRIBUTION SYSTEMS. IN HEARINGS LAST YEAR BEFORE THIS SUBCOMMITTEE, I HIGHLIGHTED THE NEED TO EXPEDITE PROCESSING OF DISTRIBUTION SYSTEM LOAN APPLICATIONS SO THAT AGRICULTURAL USERS, WHO TODAY RELY HEAVILY ON GROUNDWATER, WILL BE ABLE TO TAKE ADVANTAGE OF CAP WATER AS SOON AS POSSIBLE. THE CONGRESS RESPONDED BY INCLUDING \$2 MILLION IN THE FY 1982 APPROPRIATION FOR DISTRIBUTION SYSTEM CONSTRUCTION ACTIVITIES. THE SENATE APPROPRIATIONS COMMITTEE FURTHER INSTRUCTED THAT FUTURE BUDGETS FOR CAP WATER DEVELOPMENT, POWER DEVELOPMENT, AND NON-INDIAN DISTRIBUTION SYSTEMS BE PRESENTED AS A SINGLE LINE ITEM.

DESPITE THIS REQUEST, NO FUNDS FOR DISTRIBUTION FINANCING HAVE BEEN INCLUDED IN THE PRESIDENT'S CURRENT BUDGET REQUEST. IT IS ESTIMATED THAT AN APPROPRIATION OF \$17.4 MILLION WILL BE

NEEDED IN FY 1983 TO KEEP DISTRIBUTION SYSTEM DESIGN AND CONSTRUCTION ON SCHEDULE. I URGE YOU TO APPROPRIATE THIS FULL AMOUNT. THE BENEFITS OF CAP CAN NOT BE REALIZED WITHOUT THE FACILITIES TO TREAT AND MOVE WATER FROM THE MAIN AQUEDUCTS TO ULTIMATE CONSUMERS.

MR. CHAIRMAN, I AM PLEASED TO REPORT THAT, SINCE MY LAST APPEARANCE BEFORE THIS COMMITTEE, THE DIFFICULT PROBLEM OF IDENTIFYING A CONSENSUS PLAN FOR CAP REGULATORY STORAGE AND FLOOD CONTROL HAS NOW BEEN ACCEPTABLY RESOLVED. AFTER CAREFUL CONSIDERATION OF EIGHT OPTIONS DEVELOPED BY A JOINT BUREAU OF RECLAMATION - CORPS OF ENGINEERS STUDY, THE ARIZONA FLOOD CONTROL ADVISORY BOARD HAS ENDORSED A PLAN CALLING FOR THE CONSTRUCTION OF A NEW WADDELL DAM AS AN ALTERNATIVE TO THE CONTROVERSIAL ORME DAM. SECRETARY WATT HAS APPROVED THE PLAN AS WELL, OPENING THE WAY FOR INITIATION OF THE NECESSARY ENVIRONMENTAL IMPACT STATEMENT.

THE CONSTRUCTION OF WADDELL DAM AND RESERVOIR ON THE AGUA FRIA RIVER WOULD PROVIDE THE REGULATORY STORAGE OF CAP WATER REQUIRED BY THE ORIGINAL AUTHORIZING LEGISLATION. THE FLOOD CONTROL FUNCTIONS FORMERLY ASSIGNED TO ORME DAM WOULD BE ACCOMPLISHED BY CONSTRUCTION OF A NEW CLIFF DAM ON THE VERDE RIVER, AND BY MODIFICATION OF ROOSEVELT DAM AND RECONSTRUCTION OF STEWART DAM, BOTH ON THE SALT RIVER.

WITH THIS DECISION, THE PROTRACTED CONTROVERSY OVER ORME DAM HAS FINALLY BEEN PUT TO REST. THE SELECTION OF THIS ALTERNATIVE WAS MADE ONLY AFTER CLOSE CONSULTATION WITH ALL AFFECTED PARTIES. I BELIEVE THAT THE PLAN SENSIBLY ADDRESSES NOT ONLY THE STATE'S WATER MANAGEMENT NEEDS, BUT ITS CONSERVATION PLANNING GOALS AS WELL.

IT HAS MY FULL SUPPORT AND THAT OF ARIZONA'S ENTIRE CONGRESSIONAL DELEGATION. WITH CAP SCHEDULED TO COME ON LINE IN 1985, I BELIEVE IT IS ESSENTIAL THAT WE NOW MOVE QUICKLY TO BUILD THESE CRITICAL STORAGE AND FLOOD CONTROL FACILITIES.

IN THE INTEREST OF ENERGY CONSERVATION, I ASK YOUR FAVORABLE CONSIDERATION OF AN APPROPRIATION OF \$325,000 FOR THE YUMA - MESA IRRIGATION AND DRAINAGE DISTRICT, GILA PROJECT, AND THE UNIT B IRRIGATION AND DRAINAGE DISTRICT, AND YUMA AUXILIARY PROJECT. THESE FUNDS ARE NEEDED TO INSTALL AN ADDITIONAL REGULATORY PUMP AT THE YUMA - MESA PUMPING PLANT AND TO REIMBURSE YUMA - MESA FOR UNIT B'S SHARE OF THE COST OF REHABILITATING EXISTING MOTORS AT THE PLANT. THE ADDITIONAL PUMPING CAPACITY RESULTING FROM THESE IMPROVEMENTS AND ADDITIONS WILL PERMIT YUMA - MESA TO BETTER ACCOMMODATE THE SCHEDULE OF PUMPING DEMANDS, THUS YIELDING SIGNIFICANT ENERGY SAVINGS.

I WOULD ALSO ENCOURAGE YOU TO SUPPORT THE APPROPRIATION REQUESTED IN THE PRESIDENT'S BUDGET FOR CORPS OF ENGINEERS FLOOD CONTROL ACTIVITIES IN ARIZONA. THE \$12,253,000 REQUESTED WOULD PROVIDE FOR BADLY NEEDED FLOOD CONTROL PLANNING STUDIES OF THE RILLITO RIVER IN TUCSON, THE LITTLE COLORADO RIVER AT HOLBROOK, AND THE GILA RIVER NEAR SAFFORD. IN ADDITION, THESE FUNDS WOULD PERMIT CONTINUED CONSTRUCTION ON THE INDIAN BEND WASH FLOOD CONTROL PROJECT IN SCOTTSDALE, THE NEW RIVER AND PHOENIX CITY STREAMS PROJECT, AND WOULD ALLOW FOR CONTINUED OPERATION AND MAINTENANCE OF ALAMO, PAINTED ROCK, AND WHITLOW RANCH DAMS.

MR. CHAIRMAN, I WOULD ALSO LIKE TO BRING TO YOUR ATTENTION A PROBLEM THAT IS OF GREAT CONCERN NOT ONLY TO ARIZONA, BUT TO ALL SEVEN COLORADO RIVER BASIN STATES.

WHEN CONGRESS PASSED THE COLORADO RIVER BASIN PROJECT ACT IN 1968, IT RECOGNIZED THE EVENTUAL NEED TO AUGMENT THE COLORADO RIVER'S WATER SUPPLY. THERE HAVE BEEN VARIOUS SUGGESTIONS AS TO HOW BEST TO ACCOMPLISH THIS. BUT UNTIL NOW, NONE OF THESE IDEAS HAS APPEARED WORKABLE.

HOWEVER, THE BUREAU OF RECLAMATION RECENTLY TESTIFIED THAT ITS MANY YEARS OF WEATHER MODIFICATION RESEARCH HAVE BEGUN TO PRODUCE REAL RESULTS. BUREAU OFFICIALS NOW BELIEVE THAT A LARGE-SCALE SEEDING PROGRAM HAS THE POTENTIAL TO AUGMENT THE COLORADO'S

FLOW BY MORE THAN 1.5 MILLION ACRE FEET (MAF) PER YEAR. THE POTENTIAL BENEFITS OF SUCH AN INCREASED FLOW FOR ALL THE STATES IN THE BASIN ARE ENORMOUS. IN ADDITION TO INCREASING AVAILABLE WATER SUPPLIES FOR MUNICIPAL, INDUSTRIAL, AND AGRICULTURAL USERS, AN AUGMENTED FLOW OF 1.5 MAF WOULD IMPROVE THE RIVER'S HYDROELECTRIC POWER GENERATING CAPACITY AND HELP IN REDUCING SALINITY, A PROBLEM THAT IS BECOMING INCREASINGLY SERIOUS, PARTICULARLY IN THE LOWER REACHES OF THE RIVER.

I BELIEVE THAT IT IS TIME TO MOVE OUT OF THE LABORATORY AND IN TO THE FIELD TO TEST THE PRACTICAL APPLICATION OF THIS IDEA. REPRESENTATIVES OF THE SEVEN BASIN STATES MET IN EARLY JANUARY TO PROPOSE A COLORADO RIVER AUGMENTATION DEMONSTRATION PROGRAM. I STRONGLY SUPPORT THIS INITIATIVE, AND URGE THE CONGRESS TO APPROPRIATE THE FUNDS NEEDED TO IMPLEMENT IT.

FINALLY, I WOULD LIKE TO SUBMIT FOR THE RECORD STATEMENTS BY THE HONORABLE MARGARET T. HANCE, MAYOR OF PHOENIX; THE HONORABLE LEWIS C. MURPHY, MAYOR OF TUCSON; THE CENTRAL ARIZONA WATER CONSERVATION DISTRICT; AND THE METROPOLITAN WATER DISTRICT. THESE PREPARED REMARKS EXPLORE IN GREATER DETAIL SOME OF THE CONCERNS I HAVE OUTLINED TODAY, AND DEMONSTRATE THE BROAD SUPPORT THAT CONTINUED FUNDING FOR CAP HAS THROUGHOUT ARIZONA.

MR. CHAIRMAN, AS YOU AND THE OTHER MEMBERS OF THE COMMITTEE ARE AWARE, WATER IS ESSENTIAL TO ARIZONA'S FUTURE DEVELOPMENT. FOR THE PAST TEN YEARS, CONGRESS HAS ACKNOWLEDGED THIS FACT BY CONTINUING TO SUPPORT FUNDING FOR CONSTRUCTION OF THE CENTRAL ARIZONA PROJECT. I AM GRATEFUL FOR THE PROGRESS YOU HAVE MADE POSSIBLE; THE END IS NOW IN SIGHT. I FIRMLY BELIEVE THAT TIMELY COMPLETION OF CAP IS NOT ONLY IN THE INTEREST OF ALL ARIZONANS BUT IN THE NATIONAL INTEREST AS WELL.

THANK YOU.

STATEMENT OF GEORGE BARR, VICE PRESIDENT, CENTRAL ARIZONA WATER
CONSERVATION DISTRICT

My name is George Barr of Tucson, Arizona. I am Vice President of the Central Arizona Water Conservation District and present this statement on behalf of the District.

In 1968, Congress enacted the Colorado River Basin Project Act (P.L. 90-537) which authorized the construction of the Central Arizona Project. Among other things, it provided that the Secretary of the Interior could contract for the repayment of the costs of the Project either with individual water using entities or with a single political subdivision of the State of Arizona authorized to levy assessments against real property. The Secretary, in combination with the Office of Management and Budget, elected to follow the latter course and so advised officials in Arizona.

In 1971, the Arizona legislature enacted the necessary statutory authority for the creation of a multi-county water conservation district. Pursuant to this authority, the District was formed, composed of the three Central Arizona counties of Maricopa, Pima and Pinal. In these counties reside about 80% of Arizona's population, and they contain about 60% of the State's irrigated land.

The District was authorized by law to contract with the Secretary for the repayment of Project construction costs which might be allocated to it plus its share of operation, maintenance and replacement costs. In addition, the District was given authority to levy an ad valorem tax at a rate not to exceed 10¢ per \$100 of assessed valuation on the taxable property within the District boundaries. It also may subcontract, in conjunction with the United States, for the sale of water to water users within the District and make charges therefor.

Shortly after the formation of the District, negotiations were undertaken with representatives of the Department

of the Interior. These culminated in a repayment contract which was executed on December 15, 1972. Pursuant to this agreement, the District is obligated to repay to the United States the costs of constructing the Central Arizona Project which may be allocated to it plus appropriate charges for operation, maintenance and repair. The District is ready and willing to fulfill its obligations under the contract, and for several years has levied an ad valorem tax to assist in repaying construction costs which will approximate one and one-half billion dollars.

Early in 1985 we will have works in place to deliver Central Arizona Project water to the Phoenix area. For years it has been the plan to deliver water on south to the Tucson area within two or three years after initial deliveries. Now we hear from the Bureau of Reclamation that deliveries to Tucson and project completion probably will be delayed because of funding cutbacks. While the District and its people understand the pressures of the overall economic situation in the Nation and the financial stress within government itself, we urge the Congress to appropriate sufficient funds to keep this project on or very near schedule. You are investing in the future working capital of the Southwest and the Nation. From the dollars you invest today, directly attributable value will flow for over a hundred years.

I have alluded to the financial stress in which the Federal government finds itself. In this respect, we are appreciative of the confidence shown in the Central Arizona Project by the President as he included a substantial amount for continued construction in his budget request. As appreciative as we are, we must ask for one addition to the Administration's request. We would like for you to add \$17.4 million for the planning and construction of distribution systems to serve non-Indian lands. This is for a phase of the project that is authorized but has not been effectively funded

to date. A small appropriation of \$2 million for the current year is apparently tangled in the administrative workings of the system and will not be made available to user districts for work on distribution systems. A beginning on these systems is needed if we are to deliver water to those areas determined to be most in need when delivery capabilities are achieved in 1985.

I wish to thank you for the opportunity to appear and present this statement to the committee.

STATEMENT OF LEWIS C. MURPHY, MAYOR, TUCSON, ARIZ.

Attached for your use before the U.S. Senate Appropriations Committee, Subcommittee on Energy and Water Development and the U.S. House Appropriations Committee, Subcommittee on Energy and Water Development, is a Memorial adopted by the Tucson Mayor and Council indicating their support for the projected \$160.9 million Central Arizona Project budget for fiscal year 1983 beginning October 1. The City is extremely concerned that this level of annual funding will be insufficient to assure delivery of Central Arizona Project water to the Tucson area by 1989. Additionally, the City is concerned about the maintenance of sufficient federal funding on an annual basis without interruption to assure the completion of the Central Arizona Water Control Study selected alternative as well as those elements of the Tucson Aqueduct delivery system previously agreed to by Secretary of the Interior, James Watt. These approved Tucson Aqueduct criteria include sizing, extension to the south boundary of the San Xavier Indian Reservation, and large reservoir storage in the Tucson area.

Even though the United States Bureau of Reclamation does not have accurate cost estimates to complete these critical Central Arizona Project elements, it is anticipated that at least \$250 million per year will be required for the next five fiscal years. The City recommends that this level of funding be sought annually for each year following fiscal year 1983 to assure that all of the State's CAP needs are fulfilled.

ADOPTED BY THE
MAYOR AND COUNCIL
MAR 15 1982

A MEMORIAL

RELATING TO CENTRAL ARIZONA PROJECT FUNDING FOR FISCAL YEAR 1983

TO THE PRESIDENT AND THE RESPECTIVE CHAIRMEN OF THE HOUSE AND
SENATE APPROPRIATIONS COMMITTEES OF THE CONGRESS OF THE UNITED
STATES OF AMERICA:

Your Memorialist respectfully represents that:

WHEREAS, the completion of the Central Arizona Project is
essential to the best interests of the citizens of the City of
Tucson; and

WHEREAS, the City of Tucson is extremely concerned that
current levels of funding are insufficient to assure delivery of
Central Arizona Project water to the Tucson area by 1989; and

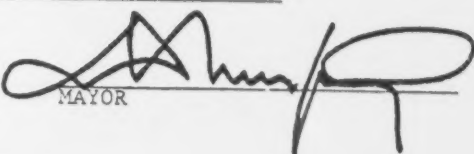
WHEREAS, it is critical that federal funding be maintained
at a level that will assure the completion of the Central Arizona
Water Control Study selected alternatives previously agreed to
by Secretary of the Interior James Watt. These approved Tucson
Aqueduct criteria include sizing, extension to the south boundary
of the San Xavier Indian Reservation, and large reservoir storage
in the Tucson area; and

WHEREAS, it is anticipated that at least \$250 million per
year for the next five fiscal years will be required to complete
these critical CAP elements;

THEREFORE, YOUR MEMORIALIST, THE MAYOR AND COUNCIL OF THE
CITY OF TUCSON PRAYS:

That the President and the Congress of the United States
support the projected level of funding of \$160.9 million for the
Central Arizona Project for fiscal year 1983.

PASSED, ADOPTED AND APPROVED by the Mayor and Council of the
City of Tucson, Arizona, MAR 15 1982


MAYOR

STATEMENT OF ROBERT P. WILL, REPRESENTING THE METROPOLITAN WATER
DISTRICT OF SOUTHERN CALIFORNIA

I am Robert P. Will representing the Metropolitan Water District of Southern California. Metropolitan appreciates this opportunity to testify in support of appropriations for the Central Arizona Project for fiscal year 1983. The Administration has requested \$160,990,000.

Just within the past few months, the Bureau of Reclamation awarded a construction contract for the last reach of the Granite Reef Aqueduct from the Colorado River to Phoenix. This is a milestone for this project and the needs of the people in Arizona. A recent article in the New York Times points up the fact that Phoenix's population is outgrowing its existing water supplies and that a determined effort to promote conservation is underway. The projected first delivery of Colorado River water to the Phoenix area is 1985, not a moment too soon. A slow down in the current construction schedule will create real problems.

The appropriation request will maintain this schedule. Metropolitan recognizes the need to keep water projects on schedule and strongly supports this funding.

STATEMENT OF MARGARET T. HANCE, MAYOR, PHOENIX, ARIZ.

I would like to take this opportunity to emphasize the importance to the City of Phoenix of maintaining the scheduled 1985 delivery date for the Central Arizona Project (CAP) water.

Last year at this time, I advised you that we were providing water service to over 3/4 million residential customers and nearly 25,000 commercial, industrial and governmental accounts. This year with our continued growth and the acquisition of a large water company, we added over 50,000 new customers in 1981. These new customers, combined with the hottest summer on record, drove our 1981 water demand to 280,000 acre feet or over 90 billion gallons! The City Council and I have responded to these record high demands by initiating a water conservation program city wide. By 1985, with the help of conservation and more typical weather, we hope to reduce that demand to a little over 80 billion gallons a year and still add over 100,000 new customers. At that time our water service area population will be nearly one million people.

While the City has access to large quantities of good quality surface water from the Salt River Project (SRP), we do not have sufficient water of adequate quality to meet our needs in areas outside of the SRP. The preliminary allocations of CAP will provide only about 60 percent of Phoenix' needs in these areas starting in 1985. Development of new groundwater sources and strict water conservation will be required to bring supply and demand into balance even after the delivery of the Central Arizona Project water. Without the delivery of CAP water on schedule, our citizens would face economic hardships brought about by the City's inability to provide adequate water service to all of its customers.

While my primary concern for the expeditious completion of the CAP is to ensure an adequate water supply for our citizens in the future, I consider the flood control features of the project as no less important to the long-term welfare of our community. Today, as I am writing this letter, there are flood flows in the Salt River. While they are not of disastrous proportions, they do cause damage and hardships, and they serve to remind me of the devastating floods of 1978, 1979 and 1980. The loss of that valuable water resource and the concomitant damage and destruction emphasize our urgent need for more upstream control. The City of Phoenix urges that the Cliff Dam and New Roosevelt Dam features of the Orme Dam alternative plan be completed as rapidly as possible. Until they are, this area will continue to be held hostage to the whims of unpredictable weather.

I respectfully request that you consider the foregoing information during your subcommittee's deliberations on the Central Arizona Project funding. I recognize the importance of holding the 1983 deficit to a bare minimum. I trust you will recognize the importance of maintaining a reasonable schedule on the completion of these projects. Thank you for your attention on this important matter.

LOWER MISSISSIPPI RIVER FLOOD CONTROL PROJECTS

STATEMENT OF HON. THAD COCHRAN, U.S. SENATOR FROM MISSISSIPPI

Senator COCHRAN. We appreciate this morning seeing Senator Russell Long and Senator David Pryor with us. We are going to be moving to consideration of the administration's request for funding of projects in the lower Mississippi River Valley. We have representatives of the Lower Mississippi Valley Flood Control Association here with us this morning, along with the Port of New Orleans, the Red River Valley Association, and the Ouachita River Valley Association, all of whom will be presenting testimony to the subcommittee this morning.

I, of course, realize, as all of you do, that flood control is of immense importance to the lower Mississippi Valley. The economic loss and human suffering that will be prevented by reducing the threat of floods of homes and businesses, coupled with the additional productivity from agriculture, will more than justify the costs of construction and operation and maintenance on the authorized projects in the lower valley.

YAZOO BASIN PROJECTS

Of particular concern to me are those projects within the Yazoo basin. I am pleased the President's budget request recognizes the importance of continuing the flood control effort in the basin. We are especially concerned that we should move ahead as quickly as possible on the Yazoo backwater project.

We know the Corps has recently brought forth recommendations on the installation of the pumping plant to reduce the backwater flooding. These recommendations will be heard next week at a public hearing in Mississippi. We hope that we will see an expedited review of these recommendations by the Corps in order that a final decision may be reached and implementation of the project will begin at the earliest possible date.

Although the budget also would allow for continued development in construction on most of the projects in the lower valley, the recommendation to withhold \$150 million in operation and maintenance funds nationwide worries me considerably because of the adverse impact that could have on our inland waterways, shallow draft harbors, and commercial ports. I know the committee is going to look very carefully and thoroughly at that request. In this time of budget deficits, we all realize we need to exercise fiscal restraint, be responsible, and some difficult decisions will have to be made. But I am confident this committee can continue to support our longstanding commitment to flood control within the budget requested by the President.

I look forward to hearing the testimony today from representatives of levee boards and others who will appear before the subcommittee. Your firsthand knowledge of the problems and needs of the areas affected will certainly be of great benefit to the members of this committee.

Senator Hatfield, who is chairman of the Committee on Appropriations and also chairman of this Subcommittee on Energy and Water Development, is unable to be here today because of another commitment. He has asked me to chair these hearings. But we are very fortunate to have him in this position because of his longstanding support and sensitivity to the needs of this region.

I am also very happy to be sitting here beside my friend and distinguished colleague from the State of Mississippi, Senator Stennis. I would like for you to feel free to make any comments or statements that you would have at this time, Senator.

Senator STENNIS. Thank you very much, Mr. Chairman. I have a statement here, fairly brief, but you have a great many matters to cover. I do want to make this statement and emphasize a few of its points. But for the time being, I will waive taking time now and let you proceed here with these gentlemen. I see we have two very highly informed, conservative Senators here [laughter] to help us save some money and still move these projects forward.

I tell you, I remember when most of these projects were authorized. It continues to be an encouragement to me, as tight as money is, to support them because I know it is something constructive. There is going to be a payoff into our economy from them. They are national invest-

ments, not something that is used up today and gone tomorrow, but they are paying off now. Where would we be if we didn't have many of these projects that have come through these programs?

But I will make my statement in full later on, Mr. Chairman.

Senator COCHRAN. Thank you, Senator.

We welcome Senator Russell Long and Senator David Pryor to the subcommittee.

Senator, come forward. Any comments, observations, or statements you would like to make to the subcommittee, we would certainly welcome. We appreciate your being here and we look forward to hearing from you.

LOUISIANA WATER RESOURCE DEVELOPMENT PROJECTS

STATEMENT OF HON. RUSSELL LONG, U.S. SENATOR FROM LOUISIANA

Senator LONG. Thank you very much, Mr. Chairman.

We have some fine people here from Louisiana. We also have contacts with our friends from Mississippi who are so well represented here this morning. May I just ask all the Louisiana people to stand, those that are in the room, and those already standing raise your hand so we can see how many from Louisiana are here. [Applause.]

Thank you very much.

Senator COCHRAN. That is a fine-looking crowd, Senator. We welcome all of you.

Senator LONG. Those people, like me, all have ancestors who were Mississippians who were Louisianans, too, Mr. Chairman. [Laughter.]

So I would urge you to carefully consider what all of these witnesses have to say.

I assure you that everyone on the tax-writing committee will do everything we can to cooperate with you in the job you have in trying to handle our money responsibly and also keeping the budget under control.

OPERATION AND MAINTENANCE BUDGET CUTS

Having said that, I want to say that I am very concerned about the point that you raised, Senator Cochran, in your opening statement. I find it nothing less than alarming to see that the administration is recommending that you cut funds for operation and maintenance from \$615 million to \$465 million. The effect of this cut in Louisiana is to eliminate the maintenance dredging for fiscal year 1983 for some of the most traveled segments of our national waterway system. If the Mississippi River-gulf outlet is to be kept at its authorized depth, the maintenance dredging will have to be done at a later date. So what is being considered here is to let the silt accumulate, which means in the following years you would have to dredge it all out anyway. It is much better to keep up with a chore like that rather than to fall behind and have the ship running aground because of inadequate maintenance.

I know that the administration promises at some point to restore operation and maintenance if Congress will agree to a cost-sharing formula. I would hope that you would just do your job of providing for

these needs of the Nation and we will work with you to provide whatever revenue is necessary to finance the essential activities to this Government. It is going to require we raise a lot of revenue before we are through, looking at what the problems of this Government are going to be, but I don't see why we should neglect vital work, such as the ones you have before you, waiting on the tax function. We will do our part on that. We will provide what revenues we think are essential for this Government. We will ask you to vote for them when we recommend our legislation.

RED RIVER WATERWAY, LA.

I further want to suggest to you that we get along with the Red River navigation project. This committee very wisely—and we are grateful for this committee's judgment—recommended that there should be \$50 million made available last year and that construction should begin on the lock and dam No. 2. I hope that the sound judgment of this committee will be projected forward.

We are also very much concerned about flood control. Forty-one percent of all that water flows past Louisiana, and a lot of that water, most of it, flows right past Mississippi as well, gentlemen, and we are all concerned about the fact that we are going to have a lot of flood waters this year. Nobody can tell just how much. But it would be a travesty after the many years we have been working to provide flood protection, not to complete the job as soon as possible. I have been working on flood control and navigation, anyway, serving as I have for 33 years, and Senator Stennis has been working on it for longer than that. After all of the years we have spent working on this project, it is still incomplete. If we should have the 100-year project flood there would be billions of dollars of damage and many lives lost. It would be a travesty because we had the time to do it and failed to take care of it.

So I would urge this committee to go forward with those essential items, and also that you consider the problems that have to do with hurricanes as well as those that have to do with floods. That is a very important matter. I know I could say to you, Mr. Chairman, as well as Senator Stennis sitting beside you, that you two have seen what devastation occurs when those hurricanes hit the State of Mississippi, just like you have observed what happens when they hit your neighboring States of Louisiana, or Florida, or others.

We would hope that this vital work will not be neglected. We want to assure you that those of us on the other committees, such as the tax-writing committee, will do our part to see whatever is necessary in other areas will be taken care of. We will be asking you for your cooperation when we recommend our legislation, just like we can assure you of ours when you make your recommendations to us.

I would like to ask my full statement be printed in the record.

Senator COCHRAN. Thank you very much, Senator. Your full statement will appear in the record. We compliment you on the remarks you have made and also for the dedication through the years in trying to secure adequate levels of funding for these important projects and

your leadership in the area. We appreciate your being with us this morning.

Senator COCHRAN. Senator Stennis?

Senator STENNIS. I want to compliment our friend, too. I want to share with this group one of his wise remarks made on the floor. He has made many of them.

A few years ago someone proposed, before we got in that trillion dollar bracket, some generous pension plan of some kind. Everybody was going to get about \$100,000 out of it. It ran into an astronomical total figure. When it finished, I leaned over—I was sitting near Russell—and said, "Russell, did he say where he was going to get the money?" Russell said, "No, he didn't say, but I think he is going to take it out of the deficit." [Laughter.]

So, Russell, we are going to depend on you to keep our Government from swinging around where everything has to be paid out of the deficit.

Senator LONG. We have to quit trying to finance things with optimistic assumptions around here. We will. [Laughter.]

[The statement follows:]

STATEMENT OF SENATOR LONG OF LOUISIANA

I AM PLEASED TO APPEAR BEFORE YOU TODAY TO DISCUSS FISCAL YEAR 1983 APPROPRIATIONS FOR WATER RESOURCES PROJECTS.

WE HAVE MANY FINE LOUISIANIANS HERE WITH US TODAY WHO ARE PREPARED TO TESTIFY BEFORE THIS SUBCOMMITTEE. I WILL LET THEM TALK ABOUT THE APPROPRIATIONS FOR THEIR SPECIFIC PROJECTS. I KNOW THE SUBCOMMITTEE IS ANXIOUS TO TAKE ADVANTAGE OF THEIR EXPERTISE.

I DO WANT TO RAISE SEVERAL POINTS I BELIEVE WE SHOULD KEEP IN MIND AS WE CONSIDER FUNDING LEVELS FOR THESE PROJECTS FOR THE NEXT FISCAL YEAR. WE ALL ACCEPT THE NEED TO REDUCE FEDERAL SPENDING. I BELIEVE WE NEED TO CAREFULLY SCRUTINIZE CUTS TO DETERMINE IF WE WILL REALLY BE SAVING MONEY OR IF REFUSING TO SPEND MONEY TODAY WILL ONLY MEAN THAT WE MUST SPEND TWICE AS MUCH DOWN THE ROAD.

FOR THIS REASON, I FIND THE ADMINISTRATION'S PROPOSAL TO CUT OPERATION AND MAINTENANCE FUNDS FROM 615 MILLION DOLLARS TO 465 MILLION DOLLARS QUITE ALARMING. THE EFFECT OF THIS CUT IN LOUISIANA IS TO ELIMINATE MAINTENANCE DREDGING IN FY 1983 FOR SOME OF THE MOST TRAVELLED SEGMENTS OF OUR NATIONAL WATERWAY SYSTEM INCLUDING THE MISSISSIPPI RIVER GULF OUTLET. IF THIS PROJECT IS TO BE KEPT AT AUTHORIZED DEPTHS AS CONGRESS INTENDED, THE MAINTENANCE DREDGING WILL HAVE TO BE DONE AT A LATER DATE. MR. CHAIRMAN, WE ARE TALKING ABOUT MOVING SILT TO KEEP THE CHANNEL OPEN. IF WE DO NOT DO IT THIS YEAR, THAT SILT WILL BE AT THE BOTTOM OF THE CHANNEL PREVENTING TRAFFIC FROM PASSING. IT WILL ONLY HAVE TO BE REMOVED NEXT YEAR ALONG WITH THE ADDITIONAL AMOUNT OF SILT THAT WILL CONTINUE TO ACCUMULATE.

MR. CHAIRMAN, I KNOW THE ADMINISTRATION PROMISES TO RESTORE THE OPERATION AND MAINTENANCE FUNDS IF CONGRESS AGREES TO A COST SHARING FORMULA FOR OPERATION AND MAINTENANCE OF BOTH EXISTING AND NEW WATERWAY PROJECTS.

NEEDED NEW WATER RESOURCES PROJECTS HAVE BEEN TIED UP IN A BATTLE OVER COST SHARING FOR MANY YEARS. PARTIALLY AS A RESULT OF THIS CONFLICT CONGRESS HAS NOT PASSED AN AUTHORIZATION BILL SINCE 1976. I DO NOT BELIEVE WE SHOULD PUT THE MAINTENANCE OF OUR ONGOING PROJECTS ON THE BACK BURNER UNTIL THIS ISSUE IS RESOLVED. I BELIEVE IT WOULD BE UNFAIR, SHOULD COST SHARING BE ENACTED AT SOME LATER DATE, TO REQUIRE NON-FEDERAL ENTITIES TO PAY A PORTION OF FUTURE OPERATION AND MAINTENANCE EXPENSES BUT ALSO TO REQUIRE THAT THEY PAY FOR WHAT WE KNEW NEEDED TO BE DONE AND FAILED TO DO NOW.

MR. CHAIRMAN, WHEN I APPEARED BEFORE THIS SUBCOMMITTEE LAST YEAR, ONE OF MY MAJOR CONCERNS WAS FUNDING FOR THE RED RIVER WATERWAY NAVIGATION PROJECT. I WAS PLEASED THAT THIS SUBCOMMITTEE AND THE FULL CONGRESS AGREED THAT THIS PROJECT SHOULD RECEIVE \$50 MILLION DOLLARS IN FY 1982 TO CONTINUE CONSTRUCTION AND TO BEGIN CONSTRUCTION ON LOCK AND DAM #2. I HOPE THAT THE COMMITTEE WILL CONTINUE TO RECOMMEND THE FUNDS NECESSARY TO MOVE THIS PROJECT ALONG.

MR. CHAIRMAN, I AM ALSO ESPECIALLY CONCERNED ABOUT FUNDING FOR FLOOD CONTROL PROJECTS. MY STATE IS AT THE FOOT OF THE GREATEST WATERSHED IN OUR NATION. WATER FROM 41 PERCENT OF OUR COUNTRY FLOWS THROUGH THE WATERWAYS IN LOUISIANA IN ITS PATH TO THE GULF OF MEXICO. NO ONE IN LOUISIANA NEEDS TO BE REMINDED OF THE NUMEROUS TIMES THAT THIS WATER HAS FLOWED AT RATES OVERFLOWING RIVER BANKS AND CAUSING WIDESPREAD FLOODING.

THE MISSISSIPPI RIVER AND TRIBUTARIES PROJECT WAS DESIGNED TO PROTECT THE PEOPLE OF THE LOWER MISSISSIPPI RIVER VALLEY FROM A FLOOD OF THE INTENSITY THAT WILL OCCUR ONCE EVERY 100 YEARS. THE 1973 FLOOD SHOWED HOW MUCH ADDITIONAL WORK NEEDS TO BE COMPLETED AS QUICKLY AS POSSIBLE TO UPGRADE AND RAISE LEVEES ALONG THE MISSISSIPPI RIVER. MUCH OF THE ADDITIONAL WORK REQUIRED TO BE DONE ON THIS PROJECT IS IN MY STATE. THE AREA SURROUNDING THE MISSISSIPPI RIVER IS GENERALLY DENSELY POPULATED OR VALUABLE,

PRODUCTIVE FARMLAND. ADDITIONAL SUMS SPENT TO HASTEN COMPLETION ON THE MR&T PROJECT NOW ONLY LESSEN THE AMOUNT THAT WILL BE SPENT FOR DISASTER RELIEF WHEN THE INEVITABLE FLOOD OCCURS. MR. CHAIRMAN, WE KNOW WE ARE RACING THE CLOCK TO HAVE THE PROJECT COMPLETED BEFORE WE HAVE ANOTHER FLOOD THAT WILL POUR 3 MILLION CUBIC FEET OF WATER PER SECOND ON MY STATE. WE NEED TO MOVE FORWARD AS QUICKLY AS POSSIBLE.

MR. CHAIRMAN, I HOPE YOU AND THE OTHER MEMBERS OF THIS SUBCOMMITTEE WILL GIVE YOUR CAREFUL ATTENTION TO THE TESTIMONY YOU ARE GOING TO HEAR. I KNOW YOUR JOB IS NEVER EASY. YOU HAVE TO LISTEN TO MANY GROUPS, WITH URGENT NEEDS AND DETERMINE HOW LIMITED AMOUNTS OF MONEY SHOULD BE DISTRIBUTED. I JUST ASK THAT YOU CONSIDER OUR SPECIAL PROBLEMS IN LOUISIANA OUR VULNERABILITY TO FLOODS AND HURRICANES. I ALSO HOPE THAT YOU WILL REMEMBER THE CONTRIBUTION THAT LOUISIANA'S WATERWAYS MAKE TO THE COMMERCE OF OUR NATION. THAT IS AN INVESTMENT WE MUST MAINTAIN FOR THE BENEFIT OF THE ENTIRE COUNTRY.

ARKANSAS WATER RESOURCE PROJECTS

STATEMENT OF HON. DAVID PRYOR, U.S. SENATOR FROM ARKANSAS

Senator COCHRAN. Senator David Pryor from Arkansas is here, and we appreciate his coming to help educate the committee this morning and be a part of this hearing. We certainly enjoy serving with the good Senator from Arkansas. We want you to make whatever comments or observations or statements that you would like. Welcome.

Senator PRYOR. Thank you, Mr. Chairman, and Senator Stennis. Thank your for allowing me to appear today.

I would like to say, Senator Stennis, that Senator Cochran and I came to the Senate at the same time as first-year Members of the Senate. I am sure that he agrees with me that one of the great privileges that people like Senator Cochran and I share, not only being good neighbors, is also having the opportunity to serve with true legends like yourself and Senator Long in this great deliberative body. They say it is the greatest deliberative body in the world. Sometimes it is too deliberative, as you know. [Laughter.]

It takes too much time to get things done. But I would, Mr. Chairman, like to pay my personal respects to Senator Stennis, yourself, and Senator Long and those who have worked so hard and who have really had the vision over the past decades to recognize the fact that this national investment that you so eloquently referred to is one that must be ongoing. It should not be ceased.

On Tuesday, the subcommittee heard testimony from citizen groups representing the Arkansas River basin, several of whom are personal friends of mine from our State of Arkansas. And from the statement they submitted, Mr. Chairman, I think that the Members can readily comprehend the serious nature of the actions that we are looking at today, that are being proposed by the administration regarding funding for operation and maintenance and the devastating effect of such severe cutbacks.

Today you will hear from three more citizen groups who are expressing support for the development of other major water projects in the State of Arkansas. I am proud to be here with these individuals, to associate myself with their remarks that they will make shortly, and to assure this committee that the views they express are representative of the thinking of the people of Arkansas on these particular issues.

If I might, Mr. Chairman, if you will allow me the personal privilege of asking those people from the State of Arkansas who are here to stand, if they would. We have a goodly number of them. [Group standing.]

INTRODUCTION OF WITNESSES

I won't attempt, Mr. Chairman, to introduce all of these individuals in the interest of time. But I do want to make mention of their spokesmen. First, from the Lower Mississippi Valley Flood Control Association, of which I am honored to be a vice president, Mr. George Grugett of Memphis, Tenn. George is accompanied by Maurice Smith and also by the Arkansas State representative, former speaker of the house, Jim Shaver; and Mr. David Solomon, who has been active in this movement for many, many years. Mr. Solomon is, incidentally, a member of the Arkansas State Highway Commission. And there are others which time will not permit me to recognize.

Second, I want to recognize Mr. Lloyd Platt. He is a gentleman from my hometown of Camden, Ark., who now serves as the executive director of the Ouachita River Valley Association. Lloyd took the reins a couple of years ago from a man who is known not only by this committee, but who has been known nationwide for some 45 years, Mr. H. K. Thatcher. He also was the director of this Ouachita River Valley Association and certainly one of the founding fathers and moving spirits of this movement.

Mr. Platt, by the way, has served in this capacity very, very well.

As you know, Mr. Chairman, I have long been a strong supporter of the Ouachita River navigation project in Arkansas and Louisiana. I have supported continuing funds for its completion every time it has been voted on. We must continue, I believe, a strong effort to keep this project moving forward.

Lastly, Mr. Chairman, the Red River Valley Association will present its testimony this morning to this subcommittee. The honorable John F. Stroud, Jr., of Texarkana, is a former member of the Arkansas Supreme Court. He will represent the Arkansas interests in this great river which runs through both of our States, as does the Ouachita. Mr. Stroud will be accompanied by Mr. Jack Williams and Mr. Lynn Lowe, both of Texarkana, and Mr. Vincent Foster of Hope, Ark.

Finally, Mr. Chairman—and I do have a longer statement that I would like to have printed in the record—I would like to just close by saying that I am very, very concerned, as I believe the members of this subcommittee are, about the initiated actions in regard to the waterway user fee issue which, if implemented, I think would destroy the barge industry and waterway navigation, according to several very authoritative sources.

In attempting to persuade us in the Congress to support the full cost recovery concept, the President has proposed in his fiscal year 1983 budget severe reductions in operation and maintenance for shallow-draft harbors and channels. These reductions, I think, would have the effect, for example, in the Arkansas River, of closing that navigation system down for several hours each day or possibly eliminating maintenance dredging. To do that would allow this great river to revert to its prenavigation stage, negating the billion dollar McClellan-Kerr system. If we don't have harbors and navigable channels, we sure don't need expensive lock and dam systems. So I hope that this subcommittee and the Congress will view this concern with the diligence that I know you will.

Mr. Chairman, I would like to once again thank you for allowing me to come and present the witnesses this morning. I would like to ask, if I might, that my full statement be printed at this point in the record.

PREPARED STATEMENT

Let me also applaud the fine work of Senator Johnston, our neighbor from Louisiana. He has done an admirable job in the past, as I know he will in the future. I would like to say that all Arkansans appreciate Senator Johnston.

Senator COCHRAN. Senator Johnston, would you like time for rebuttal? [Laughter.]

Senator JOHNSTON. I certainly would. Would you repeat that? [Laughter.]

Senator PRYOR. I said that, Bennett, while all the Louisianans are out in the hall. They still can't get in. I didn't want them to hear that.

Senator JOHNSTON. I want to thank you for that statement.

Senator COCHRAN. Thank you, Senator, for being here. We appreciate your statement and your observations and your introduction of the fine people from Arkansas who will be coming before the subcommittee this morning. Your statement will be printed in full in the record.

[The statement follows:]

STATEMENT OF SENATOR PRYOR OF ARKANSAS

I AM HONORED ONCE AGAIN TO HAVE THE PRIVILEGE, FOR THE FOURTH CONSECUTIVE YEAR, OF APPEARING BEFORE THIS SUBCOMMITTEE, ALONG WITH MY FELLOW ARKANSANS, TO EXPRESS OUR JOINT INTEREST AND CONCERN IN THE DEVELOPMENT OF THIS NATION'S WATER RESOURCES, AND TO ASK FOR THE CONTINUING SUPPORT AND UNDERSTANDING OF THE MEMBERS OF THIS COMMITTEE FOR THE NEEDS OF OUR PUBLIC WORKS PROJECTS IN THE STATE OF ARKANSAS.

ON TUESDAY THE SUBCOMMITTEE HEARD TESTIMONY FROM CITIZEN GROUPS REPRESENTING THE ARKANSAS RIVER BASIN, SEVERAL OF WHOM ARE PERSONAL FRIENDS OF MINE FROM ARKANSAS. FROM THE STATEMENT THEY SUBMITTED I THINK THE MEMBERS CAN READILY COMPREHEND THE SERIOUS NATURE OF THE ACTIONS THE ADMINISTRATION IS PROPOSING IN FUNDING FOR OPERATION AND MAINTENANCE OF ONE OF THIS NATION'S MAJOR WATER ARTERIES.

TODAY YOU WILL HEAR FROM THREE MORE CITIZEN GROUPS EXPRESSING SUPPORT OF DEVELOPMENT OF OTHER MAJOR WATER PROJECTS IN ARKANSAS. I AM PROUD TO BE HERE WITH THEM, TO ASSOCIATE MYSELF WITH THE REMARKS THEY WILL MAKE, AND TO ASSURE THE COMMITTEE THAT THE VIEWS THEY WILL EXPRESS ARE REPRESENTATIVE OF THE THINKING OF THE PEOPLE OF ARKANSAS ON THIS ISSUE.

MR. CHAIRMAN, THERE ARE MANY ARKANSANS IN THIS GROUP, BUT I WON'T ATTEMPT TO INTRODUCE ALL OF THEM TO YOU IN THE INTEREST OF TIME. I DO WANT TO MAKE MENTION OF THEIR SPOKESMEN. FIRST, FROM

THE LOWER MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION, OF WHICH I AM A VICE-PRESIDENT, IS MR. GEORGE GRUGETT OF MEMPHIS, TENNESSEE. GEORGE IS ACCOMPANIED BY MR. MAURICE SMITH AND MR. BURRELL FAIR, ARKANSAS STATE REPRESENTATIVE JIM SHAVER, AND MR. DAVID SOLOMON. THERE ARE OTHERS WHICH TIME WILL NOT PERMIT ME TO RECOGNIZE.

SECONDLY, I WANT TO RECOGNIZE MR. LLOYD PLATT FROM MY HOMETOWN OF CAMDEN, ARKANSAS WHO NOW SERVES AS EXECUTIVE DIRECTOR OF THE OUACHITA RIVER VALLEY ASSOCIATION. LLOYD TOOK THE REINS A COUPLE OF YEARS AGO FROM A MAN KNOWN TO THIS COMMITTEE FOR NEARLY FORTY YEARS, MR. H.K. THATCHER, ALSO OF CAMDEN. LLOYD PLATT HAS SERVED IN THIS NEW CAPACITY EXTREMELY WELL AND I THINK HIS ORGANIZATION IS GETTING FINE LEADERSHIP. AS YOU KNOW, MR. CHAIRMAN, I HAVE BEEN A STRONG SUPPORTER OF THE OUACHITA RIVER NAVIGATION PROJECT IN ARKANSAS AND LOUISIANA, AND HAVE SUPPORTED CONTINUED FUNDING FOR ITS COMPLETION EVERY TIME IT HAS BEEN VOTED ON. WE MUST CONTINUE A STRONG EFFORT TO KEEP THIS PROJECT MOVING FORWARD.

LASTLY, MR. CHAIRMAN, THE RED RIVER VALLEY ASSOCIATION WILL PRESENT ITS TESTIMONY TO YOU TODAY. THE HONORABLE JOHN F. STROUD, JR. OF TEXARKANA, A FORMER MEMBER OF THE ARKANSAS SUPREME COURT, WILL REPRESENT THE ARKANSAS INTERESTS IN THIS GREAT RIVER, WHICH RUNS THROUGH BOTH OF OUR STATES, AS DOES THE OUACHITA. MR. STROUD WILL BE ACCOMPANIED BY MR. JACK WILLIAMS AND MR. LYNN LOWE, BOTH OF TEXARKANA, AND MR. VINCENT FOSTER OF HOPE.

LET ME JUST ADDRESS MYSELF FOR A BRIEF MOMENT TO SOME OF THE PROBLEMS I SEE HAPPENING IN OUR STATE AS A RESULT OF SOME VERY

TOUGH BUDGET CHOICES THE PRESIDENT IS HAVING TO MAKE. THE PRESIDENT HAS INITIATED ACTIONS WITH REGARD TO THE WATERWAY USER FEE ISSUE WHICH, IF IMPLEMENTED, WOULD DESTROY THE BARGE INDUSTRY AND WATERWAY NAVIGATION, ACCORDING TO SEVERAL AUTHORITATIVE SOURCES. IN ATTEMPTING TO PERSUADE US IN THE CONGRESS TO SUPPORT HIS FULL COST RECOVERY CONCEPT THE PRESIDENT HAS PROPOSED IN HIS FY 1983 BUDGET SEVERE REDUCTIONS IN OPERATION AND MAINTENANCE FOR SHALLOW DRAFT HARBORS AND CHANNELS. THESE REDUCTIONS WOULD HAVE THE EFFECT, FOR EXAMPLE ON THE ARKANSAS RIVER, OF CLOSING THE NAVIGATION SYSTEM DOWN FOR SEVERAL HOURS EACH DAY OR POSSIBLY ELIMINATING MAINTENANCE DREDGING. TO DO THAT WOULD ALLOW THE RIVER TO REVERT TO ITS PRE-NAVIGATION STAGE, NEGATING THE BILLION DOLLAR McCLELLAN-KERR SYSTEM. IF WE DON'T HAVE HARBORS AND NAVIGABLE CHANNELS, WE SURE DON'T NEED EXPENSIVE LOCK AND DAM SYSTEMS.

BUT THE PRESIDENT HAS MADE OUR CHOICES CLEAR: EITHER SUPPORT SUBSTANTIALLY HIGHER WATERWAY USER FEES OR WATCH YOUR WATERWAY NAVIGATION SYSTEMS GO DOWN THE TUBES. ALL OF THIS HAS BEEN PROPOSED WITHOUT SO MUCH AS A BRIEF STUDY EXAMINING THE ECONOMIC IMPACTS OF MASSIVE SHUTDOWNS OF RIVER TRANSPORTATION INDUSTRIES.

AS YOU KNOW, MR. CHAIRMAN, THE PRESIDENT HAS PLACED THE RED RIVER WATERWAY IN A VERY DIFFICULT POSITION. THE ADMINISTRATION WON'T EVEN ALLOW THE CORPS OF ENGINEERS TO EXPRESS CAPABILITIES FOR SOME OF THE ASSOCIATED PROJECTS. IN ARKANSAS WE ARE PARTICULARLY CONCERNED WITH THE STATUS OF THE RED RIVER EMERGENCY BANK STABILIZATION

PROJECT AND THE RED RIVER BELOW DENIZEN DAM PROJECT. ZERO FUNDING IN FY 1983 FOR BOTH.

I URGE YOU, AS STRONGLY AS I CAN, TO LISTEN CLOSELY TO THE COMMENTS MR. STROUD WILL MAKE. SOME CHANGES WILL HAVE TO BE MADE IN THIS BUDGET. I CAN ASSURE YOU THAT I AM ONE SENATOR WHO CANNOT ALLOW THESE PROJECTS TO GO UNCARED FOR. AND I ASK FOR YOUR HELP.

THANK YOU FOR THIS OPPORTUNITY TO EXPRESS SOME OF MY CONCERNS.

OUACHITA RIVER BASIN PROJECTS

STATEMENT OF HON. J. BENNETT JOHNSTON, U.S. SENATOR FROM LOUISIANA

Senator JOHNSTON. While we are giving out kudos here, I want to thank you for your leadership on the new barge configuration idea which I thought was an ingenious idea. I joined with your leadership on that.

For those of you who don't know what it is, on the Ouachita, particularly above Monroe, you have a great deal of opposition from sportsmen who do not want some of those curves taken out of the river. They see it as a threat to water life and destroying the pristine nature of the river.

David Pryor came up with an idea of lashing together the barges differently, side by side as opposed to on top of one another. Based on that, less dredging will have to be done in the Ouachita, which in turn will greatly lessen the opposition of the sportsmen and will, I hope and trust, keep the Ouachita open.

Now in connection with that, you are correct, the amount of funding in this year's budget is not sufficient to do anything else on the Ouachita but maintain a caretaker status on the river and, in effect, shut it down. It doesn't take that much; probably another \$3 or \$4 million I think will keep it open.

I want to pledge to you we will do that. I want to say another word, since you are here and your Arkansas folks are here.

RED RIVER WATERWAY, LA.

One of the really great challenges left in waterways in the country, indeed the last undeveloped, unnavigable river—if you say the Tenn-Tom is virtually complete, and we have a little left to do there—but the last big river system that offers substantial navigation benefit is the Red River.

I want to emphasize to our friends from Arkansas that that project is not a Louisiana project. That is an Arkansas-Texas-Oklahoma-Louisiana project. We are going to stick together until it is finished all the way up to Arkansas and Texas. Let nobody mistake the fact that we are not going to stop when we get to Shreveport. We are not. We are going to stick with you under David Pryor and Dale Bumpers' leadership, and our friends from Texas, and complete the entire project. Don't let anybody ever tell you that the Louisiana folks are just interested in going to Shreveport, because we are not. We are going to be just as vociferous in our support of Red River above Shreveport.

Mr. Chairman, am I going on too long here?

Senator COCHRAN. Go right ahead.

HYDROELECTRIC POTENTIAL

Senator JOHNSTON. While on the subject of Red River Waterway, we are going to build that project. We are going to complete it. I am confident this administration is going to come up with a new benefit-cost ratio which will show what we have been saying all along, that there are hydroelectric benefits there that are immense, enormous, particularly at this time in our history when energy is so valuable. This is particularly true when other forms of energy, whether it be nuclear or coal, have certain problems associated with their use. Hydroelectric power is the cleanest and the cheapest and it is continuous—it is renewable. It has all of those good things to it.

You are going to see a new cost-benefit ratio that is going to show those benefits way up where they ought to be. And with that, we will be able to put lock and dam No. 2 under contract this year, this calendar year. Once that is done, then I think we will be well enough along on Red River that, hopefully, nobody again will try to challenge it.

New administrations come in and they look at that project and say that is a big project, so let's try to kill it. They always do. Then when they start looking at it and analyzing it in more detail, they see the benefits. That is what Jimmy Carter did. First it was on the hit list, and then he studied it a little and figured out it was a very, very good project. He got on the bandwagon.

I think President Reagan, while he didn't put it on a hit list, they were sort of dawdling with the idea of reducing the funding so that maybe lock and dam No. 2 couldn't get started. But I think that has changed and they recognize the benefits this project offers.

They also recognize the benefits of sticking with their friends who can be good friends when they are on board and who can be tough adversaries sometimes. We just don't talk about those kinds of things. [Laughter.]

But in any event, we are going to march together, side by side—Louisiana and Texas and Arkansas and Oklahoma, joining hands with the great communicator in building the Red River.

INVESTMENT IN THE NATIONAL INFRASTRUCTURE

I want to say that I don't think any of us up here on this subcommittee, or David Pryor, none of us take a back seat to balancing the budget. We are up there in the front pew. We want to get that budget balanced. But it doesn't make any sense to eat your seed corn, and the river systems in this country is that which produces wealth. It is not a consumer of wealth; it is a producer of wealth. We can build river navigation systems, be it Ouachita, the Mississippi River system, Red River, or Tenn-Tom—they are not going to be a drag on the Federal budget, but they are going to do just the opposite. They are going to produce jobs and the foundation for economic growth.

Well, you all have heard me make this speech before. We make it to one another. That is one reason why I like to be associated with this group.

We have a bunch of builders out here, Mr. Chairman. They are people who, when they have a problem, want to know how to solve it, how to build it, how to move forward. You remind me of the gentleman who was in need of a lawyer and said, "I want a lawyer who will tell me how to do it and not why I can't do it."

You are people who will give you a solution, a blueprint, a plan, and some progress as opposed to a lot of reasons why you can't do something. That is why I am proud to be here.

I am sorry I talked so long, Mr. Chairman, but I have had this on my mind.

Senator COCHRAN. I enjoyed it. Thank you very much, Senator.

Senator PRYOR. Thank you, Senator.

Senator COCHRAN. Senator Stennis, any comments?

Senator STENNIS. No. I certainly support this Red River Waterway project. It takes a little time, Senator, but you move things along, Senator Johnston. We are with you 1,000 percent.

Senator PRYOR. Thank you very much.

Senator COCHRAN. Thank you again, Senator Pryor, for being here.

LOWER MISSISSIPPI RIVER FLOOD CONTROL PROJECTS

STATEMENT OF T. M. SIMMONS, CHAIRMAN, EXECUTIVE COMMITTEE,
LOWER MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION, AND
PRESIDENT, YAZOO-MISSISSIPPI DELTA LEVEE BOARD

Senator COCHRAN. Our next witnesses are Mr. T. M. Simmons, chairman of the Lower Mississippi Valley Flood Control Association; and president of the Yazoo-Mississippi Delta Levee Board. Mr. Simmons will coordinate the presentation of several witnesses who are here representing that association.

I might say we have had introductions of the Louisiana and Arkansas delegations who are here this morning. I know we have some fine Mississippians here, Senator Stennis. I would like all of you who are here from Mississippi to please stand up. [Large group standing.]

We want to welcome you officially to this hearing. [Applause.]

Thank you very much for being here.

Mr. Simmons, I know you have others who are going to present testimony and we would like for them to come up and sit with you at the table. We don't want you to be all by yourself up here.

We have copies of the statements, which of course will be incorporated in full in the record. We want you to make any comments or summary remarks that you see fit. We are glad you are here; you may proceed.

Mr. SIMMONS. Thank you, Mr. Chairman, Senator Stennis, Senator Johnston.

My name is Mark Simmons. I am president of the Yazoo-Mississippi Delta Levee District of Clarksdale, Miss. I am also the chairman of the executive committee of the Lower Mississippi Valley Flood Control Association, and I appear here as spokesman for that association to present their views on the funding requirements for the Mississippi River and tributaries project for fiscal year 1983. I will present several items of general interest to all our membership and then call on others of our group to testify concerning specific items. Mr. Chairman, I assure you we will be as brief as possible.

For the benefit of those who may not be familiar with our association, it is an agency composed almost entirely of public bodies in parts of Illinois, Kentucky, Missouri, Tennessee, Arkansas, Mississippi and Louisiana. Our members are public officials who for the most part are elected by the people. Our association has been serving the people of the lower Mississippi Valley for 54 years, and we provide the means for all the people of our great valley to speak and act jointly on all flood control, bank stabilization, navigation, and major drainage problems.

FUNDING REQUEST

We come before you again this year supporting President Reagan's effort to slow down the increases in Government spending. Therefore, we are, in essence, supporting the President's budget request for the Mississippi River and tributaries project with some exceptions, mainly in the operations and maintenance functions of the Corps of Engineers, which I will address a little later.

MISSISSIPPI RIVER LEVEES

Our special concern, as always, is for the safety of the valley, and I would like to briefly discuss the Mississippi River levees, which are the main line of defense against flooding for major portions of the seven States we represent. The Mississippi River levees are designed to carry the drainage of 41 percent of these United States and because of the large geographical area involved, any deficiency of this system becomes a national problem. Studies made by the Corps of Engineers since the 1973 flood show that because of an unexpected deterioration in the flood flow carrying capability of the Mississippi River that deficiencies in levee heights do exist on both sides of the Mississippi River in the States of Louisiana, Mississippi, and Arkansas.

ACQUISITION OF RIGHTS-OF-WAY

As we stated to this subcommittee last year, the ability to furnish the rights-of-way for a major levee raising is taxing the financial capabilities of many of our levee boards, and although every effort is being made to provide the required rights-of-way in order to meet the construction schedules of the Corps of Engineers, that is not always possible. We have such a situation facing us in the fiscal year 1983 budget where the Corps has scheduled the expenditure of approximately \$1.5 million for levee enlargement work at Valewood and Carlisle near Mayersville, Miss., the county seat of Issaquena County.

Due to circumstances beyond our control, it will be impossible, at this time, to provide the Corps of Engineers with the necessary rights-of-way for this work. Therefore, we are requesting that the funds scheduled for the levee work at Valewood and Carlisle in fiscal year 1983 be applied to the levee enlargement at State Line to Wilson Point, La. This work is a high-priority item that is ready to go.

CHANNEL IMPROVEMENT AND STABILIZATION

We do believe that the channel stabilization program on the Mississippi River must be carried forward at the maximum speed possible to prevent further deterioration of the river channel and the resulting requirement for additional raising of main line levees. In fact, it is our hope that by increasing the stabilization work on the main channel of the Mississippi that the deterioration can be stopped. If the channel is allowed to continue to deteriorate, some of the completed flood control works on the tributaries may become ineffective.

One such project would be the Yazoo backwater area, and there are others. Over 100 years ago the Congress directed the Mississippi River Commission to "permanently locate and deepen the channel and protect the banks of the Mississippi River." We would hope that Congress would reaffirm the need to carry out this vital undertaking.

In order to support the budget, we request that the \$51.8 million in the budget, even though it is well below the Corps' stated capability and over \$7 million less than last year's budget amount, be appropriated for channel stabilization in 1983. These two items, channel stabilization and the main line Mississippi levee system, are the top priorities of our association.

L'ANGUILLE RIVER BASIN STUDY, ARKANSAS

The only item where we would request any additional funding is in the Corps' advanced engineering and design feature and concerns the engineering study for the L'Anguille River basin in Arkansas. The President's budget contains \$200,000 for continuation of this study and the Corps of Engineers has expressed a capability of \$550,000, which, if appropriated, means a considerable reduction in the completion time of this study. The L'Anguille River basin project was authorized by the Congress in 1948, and I will not go into details on the need for the project since a written statement has been submitted to the committee. We would urge the appropriation of \$550,000 for fiscal year 1983.

REDUCTION IN O&M BUDGET

There is another item that is of great concern to our association, and that is the administration's proposal to withhold \$150,000,000 from the Corps of Engineer's operation and maintenance budget for fiscal year 1983 in order to impose on the Congress legislation of user fees. This action will create serious problems in the lower Mississippi Valley that will have the gravest of consequences. It may well cause the closing of 12 ports and harbors in our area, including 3 under the Mississippi River and tributaries project. These are the ports of Memphis, Tenn., and Greenville and Vicksburg in Mississippi. This action could also adversely affect at least five much-used waterways in Louisiana. If these ports and waterways are closed for lack of maintenance, shipment of waterborne goods and commodities will halt. The farmers will certainly pay for the increased costs of shipping their commodities and this at a time when net farm income is at its lowest level since 1934.

Gentlemen, we beseech you to restore this \$150 million in order that industry not be dislocated and farmers who produce the food and fiber for this Nation not be financially ruined. Years ago the Congress and the Federal Government made a commitment to the people to maintain these harbors and waterways because it was in the Nation's interest. Please don't abandon that commitment at this time.

SUMMARY REQUEST

Our total request for the Mississippi River and tributaries project for fiscal year 1983 is \$288,350,000, which only adds \$350,000 to the President's budget if the \$150 million total that has been withheld from operations and maintenance simply to impose on this body the legislation for user fees and cost recovery is restored. And \$6 million of the \$150 million was withheld from the Mississippi River and tributaries budget and would be used for maintenance dredging of Memphis, Greenville, and Vicksburg Harbors and for the maintenance of revetments and dikes in the Mississippi River from Cairo, Ill., to the Gulf of Mexico. A detailed tabulation of our request has been filed with the committee.

In closing, I would like to express to members of the committee our total faith in the ability and integrity of the Corps of Engineers, and we assure you that this association will continue to support and cooperate with the Corps and the Mississippi River Commission in their endeavors.

Mr. Chairman, I would like to express to you and other members of your committee our appreciation for this opportunity to appear before you and for the understanding and consideration you have always given our requests.

Thank you.

Senator COCHRAN. Thank you, Mr. Simmons. We know there are others accompanying you today. Mr. Larry Dowdy, who is the maintenance supervisor of the Little River Drainage District; Mr. Newman Bolls, chief engineer of the Mississippi Levee District; and Mr. Arthur Theis, chief engineer of the Louisiana Department of Transportation and Development, Office of Public Works, in Baton Rouge.

We welcome you all and invite you to make any comments or statements that you have.

We have the list that summarizes the funding request of the association and, without objection, that will be made part of the record at this point.

[The information follows:]

LOWER MISSISSIPPI VALLEY FLOOD CONTROL ASSOCIATION
FISCAL YEAR 1983 CIVIL WORKS BUDGET
MISSISSIPPI RIVER AND TRIBUTARIES APPROPRIATION

PROJECT AND STATE	LMVCA REQUEST F.Y. 1983
<u>GENERAL INVESTIGATIONS</u>	
Mayfield Creek, Ky.	217,000
Wolf & Loosahatchie River & Nonconnah Creek, Tn & Ms	64,000
Boeuf-Tensas Basin, Ark & La	595,000
Helena and Vicinity, Ark	65,000
St. Francis River Basin below Wappapello Lake, Mo & Ark	425,000
West Memphis, Ark	108,000
Yazoo River Basin, Miss	985,000
Atchafalaya Basin (Water & Land Resources), La	310,000
Collection & Study of Basic Data	260,000
SUBTOTAL-GENERAL INVESTIGATIONS	3,029,000
<u>ADVANCED ENGINEERING AND DESIGN</u>	
St. John's Bayou-New Madrid Floodway, Mo	600,000
L'Anguille River Basin, Ark	550,000*
SUBTOTAL-ADVANCED ENGINEERING & DESIGN	1,150,000*
<u>CONSTRUCTION</u>	
Reelfoot Lake-Lake No. 9, Ky & Tn	170,000
St. Francis River Basin, Mo & Ark	5,730,000
Mud Lake Pumping Station, Tn	325,000
West Tennessee Tributaries, Tn	2,400,000
Yazoo Basin, Miss.:	(15,500,000)
Big Sunflower River	5,132,000
Greenwood	100,000
Main Stem	2,518,000
Tributaries:	
Except Ascalmore-Tippo & Oppossum Bayous	2,761,000
Ascalmore-Tippo & Oppossum Bayous	145,000
Upper Yazoo Projects	4,075,000
Yazoo Backwater	769,000
Atchafalaya Basin, La	28,300,000
Bayou Cocodrie & Tribs., La	100,000
Lower Red River-South Bank Levees, La	800,000
Old River, La	54,800,000
Tech-Vermilion Basins, La	2,271,000
Tensas Basin, Ark & La	(20,300,000)
Boeuf & Tensas Rivers, La	800,000
Lake Chicot Pumping Plant Ark	17,780,000
Red River Backwater Area	1,610,000
Tensas Cocodrie Pumping Plant	110,000
Channel Improvement, Il., Ky., Mo., Ark., Tn., Ms., & La.	51,800,000
Mississippi River Levees, Il., Ky., Mo., Ark., Tn., Ms., & La.	31,000,000
SUBTOTAL - CONSTRUCTION	\$213,496,000
REDUCTION FOR SAVINGS & SLIPPAGE	- 15,325,000
SUBTOTAL - CONSTRUCTION	\$198,171,000
<u>OPERATION AND MAINTENANCE SUBTOTAL</u>	86,000,000*
GRAND TOTAL-MISSISSIPPI RIVER & TRIBUTARIES	\$288,350,000*

*Changes from President's Budget

March 17, 1982

ST. FRANCIS BASIN PROJECT

STATEMENT OF LARRY DOWDY, MAINTENANCE SUPERVISOR, LITTLE RIVER DRAINAGE DISTRICT

Senator COCHRAN. Mr. Dowdy, you may proceed.

Mr. DOWDY. Thank you, Mr. Chairman. My name is Larry D. Dowdy. I am the maintenance supervisor of the Little River Drainage District of Cap Girardeau, Mo. I appear before you today as the representative of drainage and flood control interests in the parts of the States of Missouri and Arkansas, which are included in the St. Francis basin portion of the Mississippi River and tributaries project.

As one of the witnesses representing the Lower Mississippi Valley Flood Control Association, I endorse the policy of supporting President Reagan's effort to slow down the increase in Government spending, and I support the association's request for a total appropriation of \$288,350,000 for the Mississippi River and tributaries project for fiscal year 1983.

Included in that request is \$5,730,000 for the St. Francis basin project. This is the amount included in the President's budget and is \$5,550,000 less than the amount that the Corps of Engineers has expressed as its capability. It is also \$6,070,000 less than the amount appropriated for fiscal year 1982.

I would request that the amount of \$5,730,000 that is in the President's budget be appropriated, and we hope in the very near future that economic conditions will improve so that we may resume the rate of appropriations in our area that will allow the St. Francis basin project to be completed.

I thank you very much for this opportunity to appear before you today.

Senator COCHRAN. Thank you, Mr. Dowdy.

[The statement follows:]

STATEMENT OF LARRY D. DOWDY, MAINTENANCE SUPERVISOR, LITTLE RIVER DRAINAGE DISTRICT, MISSOURI

My name is Larry D. Dowdy. I am the Maintenance Supervisor of The Little River Drainage District of Cape Girardeau, Missouri. I appear before you today as the representative of Drainage and Flood Control interests in the parts of the states of Missouri and Arkansas which are included in the St. Francis Basin portion of the Mississippi River and Tributaries Project.

The St. Francis Basin is a flat, fertile, highly developed agricultural area of about 8,400 square miles located in Southeast Missouri and Northeast Arkansas, extending from the Commerce Hills southwest of Cape Girardeau, Missouri to the confluence of the St. Francis and Mississippi Rivers approximately 10 miles above Helena, Arkansas. The Basin is about 215 miles long and has an average width of 40 miles. There are 19 cities and towns in the in the Basin area.

The area has experienced numerous major floods since 1936, the year the St. Francis Basin Project was authorized. Flooding has occurred every year with few exceptions and flood damages are severe during the crop growing season.

As one of the witnesses representing the L. M. V. F. C. A., I endorse the policy of supporting President Reagan's effort to slow down the increase in Government spending and I support the Association's request for a total appropriation of \$288,350,000 for the Mississippi River and Tributaries Project for Fiscal Year 1983.

Included in that request is \$5,730,000 for the St. Francis Basin Project. This is the amount included in the President's Budget and is \$5,550,000 less than the amount that the Corps of Engineers has expressed as its capability. It is also \$6,070,000 less than the amount appropriated for Fiscal Year 1982. I'm certain you gentlemen can see that this vital Flood Control Project will be operating on a very austere budget in Fiscal Year 1983 and this will certainly delay completion of this Project and extend the suffering and financial loss to the people of the St. Francis Basin.

The Budget amount will not allow construction of much needed work on Ditches 24 and 19 in Missouri or upper Buffalo Creek, Blackfish Bayou or Ditches 21A, 25 and 71 in Arkansas and unfortunately this work that is so badly needed will have to be delayed.

I would request that the amount of \$5,730,000 that is in the President's Budget be appropriated and we hope in the very near future that economic conditions will improve so that we may resume the rate of appropriations in our area that will allow the St. Francis Basin Project to be completed in order that this country can realize the fruits of the great qualities of agricultural and other products from this area.

I appreciate the opportunity to appear before you and wish to express my thanks to this Committee for all your kindness and past considerations.

YAZOO BASIN PROJECT, MISSISSIPPI

STATEMENT OF NEWMAN BOLLS, CHIEF ENGINEER, BOARD OF MISSISSIPPI LEVEE COMMISSIONERS

MR. BOLLS. Good morning, Mr. Chairman.

Senator COCHRAN. Welcome.

MR. BOLLS. I am Newman Bolls from Greenville, Miss. I have the privilege of representing that board and making a brief summary of the detailed statements that have been prepared by our board and one from Mr. Joseph Mooney representing the Clarksdale Levee Board.

We wish to endorse the statement of our principal spokesman supporting the Yazoo basin project, but we wish to make special reference to the budget for the Yazoo basin for 1983—\$15.5 million. I hope the committee will allow me to digress just a minute for some personal observations.

There are few witnesses that have never had the opportunity and the honor that I have this morning in presenting this brief statement to both of the Senators from my State of Mississippi. I am deeply grateful and honored. It is also a privilege, as well, in presenting this statement to our sister States, Senator Johnston of Louisiana and Senator Bumpers from Arkansas.

Senator, I well remember your baptism of fire, maybe I should say your baptism of water, in the 1973 flood, so I know the experience you and Colonel Rees and I had and other great citizens in the flood of 1973. I know you are very knowledgeable and that you are very sympathetic to the great devastation that occurred with the lack of adequate flood control.

Of course, our esteemed Senator Stennis, in his 35 years of unparalleled service to the citizens of the United States and to the Yazoo basin, has developed an expertise and knowledge of the Yazoo basin and the needs of the lower Mississippi River that very few people will ever approach. So, we feel in a very comfortable position in making our very brief statements this morning. We know that we are before a very friendly committee, one that needs no prompting, because each of you very learned gentlemen know so intimately every crook and turn in all of these streams and know the people by name that we are representing and know the problems that they are associated with. And so we have a very reassuring feeling in coming before this committee this morning.

My remarks will be very brief, Mr. Chairman, because of your great opening statement. We are again very reassured because of the statement you made on behalf of the Yazoo backwater project, the mention of the meeting that will be held next Tuesday night, and the absolute dependence of our area on this. We hope that both you and Senator Stennis can have statements to corroborate your support of this great project, and we hope that either you or some members of your staff may be present at the hearing to present these statements. It is very vital to our area.

We have always prided ourselves in the Yazoo basin, as you gentlemen can attest, on being self-sacrificing, patriotic citizens. We come

forward again today hoping to evidence that patriotism by stating that we are supporting the budget. We are well aware that every segment, every facet of our national economy and leadership must support the efforts to control this economy, this inflation, and to bring our budget back into balance. We are willing to do our part. We are willing to accept well-thought-out reductions in these plans so long as they do not affect the overall economy and welfare, even though, as you well realize, we have total dependence upon flood control and drainage in this area.

We hope that in the near future with our economy back in balance that we can expedite this great program not only in the Yazoo basin in Mississippi, but in the whole lower Mississippi Valley, because our sister States all have similar problems. If the wisdom of this committee deems it appropriate to increase these appropriations for fiscal 1983 for the Yazoo basin, we would respectfully recommend that the Yazoo backwater project and the upper Yazoo projects, which are both very badly needed and very worthwhile projects and contribute so much not only to the economy of this area but to the entire Nation and the world, because this is a greatly productive area, that those two particular projects may be given major consideration.

As always, we are deeply grateful for the kind attention and consideration you always give our request and for the great generosity you have always evidenced in funding these great projects. Thank you, sir.

Senator COCHRAN. Thank you very much, Mr. Bolls. We appreciate your comments very, very much.

[The statement follows:]

STATEMENT OF NEWMAN BOLLS, CHIEF ENGINEER, BOARD OF MISSISSIPPI LEVEE
COMMISSIONERS, MISSISSIPPI

I am Newman Bolls, Chief Engineer, Board of Mississippi Levee Commissioners, Greenville, Mississippi. This Board offers its support to the recommendations for appropriations for the Mississippi River and Tributaries Project for FY1983 as presented by the Lower Mississippi Valley Flood Control Association. We offer specific recommendations for projects within the Yazoo Basin for which we urgently request \$15,500,000 for FY1983.

Listed below is the President's budget for FY1983 which we support and respectfully request be appropriated for this vital work:

YAZOO BASIN, MISSISSIPPI

Big Sunflower	\$ 5,132,000
Greenwood	100,000
Main Stem	2,518,000
Tributaries:	
Except Ascalmore-Tippo-Opossum	2,761,000
Ascalmore-Tippo-Opossum Bayous	145,000
Upper Yazoo Projects	4,075,000
Yazoo Backwater	769,000
Total Yazoo Basin	<u>\$ 15,500,000</u>

The program that we have so long supported is not a giveaway or a welfare scheme but is one of capital investment that repays to our national and world economy many times the original investment and, in reality, provides greatly added sources of income and products that make many of these social programs possible. The Yazoo Basin without question is one of the most highly productive agricultural areas in the world and with the gloomy forecasts of impending world hunger, it will be very shortsighted to stall the development and protection of this region that has such worldwide importance. The startling statistic that over 3,000,000 acres of arable land is being removed from productive use each year for the construction of roads, buildings and other commercial uses places an even greater burden on the remaining productive land. A recent study made by the Mississippi Research and Development Center shows that in the two principal counties in the Yazoo Backwater area, Sharkey and Issaquena, the value of their farm produce was 1.65 times the national average on a per-acre basis, further emphasizing the value of this land and its productive capacity.

We who have the opportunity and privilege now of protecting and providing for the future must exercise every available means to preserve these great natural resources of land and water so that the generations that follow will have a sufficiency of these two precious resources.

A short summary of the principal features of Yazoo Basin Projects will demonstrate the need for continuation of these improvements at a reasonable rate.

- A. Yazoo Headwater Project is designed to control the runoff from the hills and pass it safely through adequate outlets to the Mississippi River. The various components of this project are:
 1. The Hillside Reservoirs: Arkabutla, Enid, Grenada and Sardis whose flood control value is without question.
 2. Main Stem which provides for levees and other structures along the Yazoo River. The most critical item is the Wasp Lake Closure which is desperately needed to protect Belzoni, Mississippi and is under construction but needs continued funding to complete.

3. Tributaries Items which include Ascalmore-Tippo and Opossum Creeks. These items furnish flood control and drainage to a vast area in some five counties and include such urban areas as Marks and Lambert.
 4. Greenwood provides for protection works around the City of Greenwood.
- B. Upper Yazoo Projects is the improvement of the main channel of the Yazoo-Tallahatchie-Coldwater Rivers to provide adequate outlet for the entire upper Delta region of Mississippi.
 - C. Yazoo Backwater Project protects a 1,000,000 acre area in the extreme south end of the Delta from backwaters from the Mississippi and Yazoo Rivers. This project was authorized in 1941 and is still not complete. The most critical feature of this project is the Pumping Plants. It is imperative that the study be completed and that construction be initiated to protect this area.
 - D. Big Sunflower River Project presently consists of channel improvements on Steele Bayou, the only outlet for drainage in the extreme western side of the Delta and is the only source of drainage for Greenville, Mississippi with a population of over 50,000.

We in the Yazoo Basin have always prided ourselves as being patriotic, self-sacrificing citizens. This is evidenced by the vast expenditures of local taxes to support and finance the critical flood control and drainage problem so greatly affecting our area. We feel that we are again demonstrating this patriotic characteristic by not appealing for additional funds but are supporting the President's budget. We are very aware of the urgency to contain the destructive spiral of inflation and return to a balanced budget. The failure to do so will mean the utter collapse of America and with it the free world. We are willing to do our part. We are agreeable to well-thought-out reductions that will not jeopardize the overall economy and effort and ask only that we be treated fairly.

We are grateful for the careful consideration you have always given our requests and wish to thank and commend you on the difficult job you have always done so well in providing funds for these most beneficial projects.

MISSISSIPPI RIVER AND TRIBUTARIES PROJECT

STATEMENT OF ART THEIS, CHIEF ENGINEER, OFFICE OF PUBLIC WORKS,
LOUISIANA STATE DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

Senator COCHRAN. Mr. Theis?

Mr. THEIS. Thank you, Mr. Chairman, Senator Stennis and Senator Johnston. It is a privilege for me to represent Louisiana here today and appear before this subcommittee of such learned gentlemen in view of the flood control and navigation projects that we are commenting on today.

We, of course, certainly appreciate and endorse the earlier statements made by Senator Russell Long and by Senator Johnston and also, of course, share your belief, Senator Cochran, about the needs of the Mississippi River Valley and the improvements that are still required in order to complete this project. So the comments I would like to make this morning are to summarize our brief that we have already presented to your subcommittee on behalf of the State of Louisiana and also on behalf of the Association of Levee Boards in Louisiana that is composed of some 22 different levee boards throughout the State. The comments I would like to make now are, of course, in primary response to the needs of the Mississippi River and tributaries project. We will have other speakers today talking about the Red River Valley and other projects.

We, of course, in Louisiana share the desire of the Congress and the President to reduce deficit spending, to strengthen the economy, and to increase the Nation's defenses. There can be no higher priority than these items.

We do, however, want to point out several items that we think are of the highest priority in Louisiana that we believe should receive special consideration for increased funding levels.

LEVEES SYSTEM

Louisiana being the downstream end of the States in the Mississippi River Valley is not quite as fortunate as some of our upstream States in the level of completion of the MR&T project. We still have hundreds of miles of deficient levees in Louisiana, with some as much as 6 feet below project grade. With as much as two-thirds of our population dependent upon these levee systems for protection, we think it is imperative that this project be continued with all haste. With three major floods—one of which Mr. Newman Bolles talked about a minute ago—in the last 10 years, this system has been highlighted and emphasizes the needs we have to complete the project.

ATCHAFALAYA BASIN, LA.

One of the areas I would like to discuss briefly that is very important to Louisiana is the Atchafalaya Basin Floodway. This floodway below the latitude of Old River takes half of the project design flood through Louisiana. As of this time, this floodway is only 65 percent complete.

After some 50 years of construction, Senator, we think that this project needs additional emphasis and we are asking that the appropriations this year be made in the amount of \$48.3 million, which is about \$20 million over the President's budget, but we think it is justified due to the condition that this floodway is in and the need to continue on with the project.

In regards to that particular item, the Atchafalaya basin, one of the primary features has been a real estate plan, as you probably heard about, in regard to the need to protect this year, to keep it as a recreational area for not only Louisiana, but for the Nation as a whole. In that regard, Louisiana is requesting the Federal Government to join in in purchasing some 48,000 acres as a part of the real estate plan for the Atchafalaya multipurpose project.

The State of Louisiana has already received a donation from the Dow Chemical Co. of approximately 46,000 acres. This goes along with the 150,000 acres that Louisiana already owns within the basin.

MISSISSIPPI RIVER LEVEES

One of the serious deficiencies is the main line Mississippi River Levees. Since they are so far below grade and they have so many miles of it below grade, we are asking that the budget be increased in this area to \$39.5 million, which is only an \$8.5 million increase over the budget recommended by the President. And because there are so many miles of deficiency, we think that this project needs to proceed as rapidly as possible.

TENSAS BASIN PROJECT, LOUISIANA AND ARKANSAS

In the Tensas basin area, which is immediately west of the Mississippi River, we are asking for an increased appropriation in this area for the backwater area that is so seriously affected by, of course, the flood stages on the Mississippi River. In lieu of the \$20 million that was recommended, we are asking that an additional \$12.8 million be appropriated for the construction of the Tensas-Cocodrie pumping station, for two enlargement items, and also to construct two new levees in the Sicily Island area, at a cost of about \$1.5 million.

This is an area that has no protection at all at this time. This will start the protection system of that area that has been authorized.

MITIGATION MEASURES

In addition to that, we have we think a serious need to protect another segment of the environment in that area. This is termed the Tensas Wildlife Refuge Area, for which authorizations are already provided by Congress under Public Law 96-285, and some funds have already been established for this purpose. We urge the support of this subcommittee, Mr. Chairman, so that this project proceeds at the earliest possible date. Because this project acts as a mitigation bank for a number of other projects in Louisiana, that needs to progress as rapidly as possible.

Senator JOHNSTON. In that regard, Mr. Theis—and I know how important this mitigation work is—I have a letter from Mr. Gianelli, the Assistant Secretary of the Army for Civil Work, that supports the work planned for 1982. They concur with the need to spend the funds appropriated for 1982.

Mr. Chairman, if there is no objection, I would like to include that letter in the record at this point.

Senator COCHRAN. Without objection, so ordered.

[The letter follows:]

LETTER FROM WILLIAM R. GIANELLI, ASSISTANT SECRETARY OF THE ARMY
(CIVIL WORKS)

MARCH 31, 1982.

Hon. J. BENNETT JOHNSTON,
U.S. Senate, Washington, D.C. 20510

DEAR SENATOR JOHNSTON: Thank you for your letter of March 9, 1982, concerning acquisition of mitigation lands for the establishment of the Tensas River National Wildlife Refuge.

I have reviewed the recommendations of the Army Corps of Engineers for mitigation lands for the three projects under construction which are authorized for mitigation; namely, Red River Waterway, Tensas-Cocodrie pumping plant, and Sicily Island. I concur that the mitigation needs to date warrant expenditure of the funds appropriated in fiscal year 1982. Accordingly, I have asked the Corps to provide me with the overall plan describing the Tensas River National Wildlife Refuge as authorized in Public Law 96-285 and the specific plan, together with rationale, for purchase of mitigation lands using the \$5 million appropriated to the Department of the Army and the \$4.8 million appropriated to the Department of the Interior in fiscal year 1982. Upon review of the overall plan for the refuge and the approval of the specific acquisition plan for fiscal year 1982, I will ask OMB to modify the apportionment to permit use of the funds appropriated in fiscal year 1982 to acquire mitigation lands.

The need for purchase of additional mitigation lands will be reviewed periodically in the context of the annual budget process.

I am sending an identical letter to Congressman Jerry Huckaby.

Sincerely,

WILLIAM R. GIANELLI,
Assistant Secretary of the Army,
(Civil Works).

Mr. THEIS. Mr. Chairman, one of the other serious deficiencies I would like to point out in the budget this year was mentioned earlier by Senator Long and Senator Johnston, and that has to do with the appropriations for the operation and maintenance. We think it not appropriate at all to reduce the O&M funds in Louisiana to only 3 percent of what it was in 1982, to the point where you have to put navigation locks on the Ouachita River, for instance, into a caretaker status and thereby stop commerce and industrial operations on that great river. It also means in the other areas that there are a number of floodgates and a number of water controlled structures that would be taken out of operation and placed in the caretaker status. As Senator Long mentioned earlier, there are several other vital areas for which no dredging was accomplished at all, and the increased siltation and so forth would seriously hamper navigation on these various streams.

We, of course, understand the administration's need to develop other areas for which income can be provided, but we do not view the holding hostage of our operation and maintenance system in order to ac-

comply with this user charge operation. While we certainly are not opposed to an increased funding level for these operations, we do not think it appropriate that we should digress from our normal operation and maintenance work on these projects.

Senator, we certainly appreciate the opportunity to make these comments before your subcommittee and before these learned gentlemen who are so knowledgeable in this area. Of course, if there are any questions, we would be happy to respond.

PREPARED STATEMENTS

Senator COCHRAN. We appreciate very much your being here, Mr. Theis, and all of you, for the help that you are to this committee. Your thoughts and practical experience in dealing with these problems in the lower Mississippi Valley are a benefit in our work.

Now, I know you have additional prepared statements that have been submitted for inclusion in the hearing record. I am only sorry we cannot hear everyone, but we will make those statements a part of the record at this point.

[The statements follow:]

STATEMENT OF ARTHUR R. THEIS, CHIEF ENGINEER, LOUISIANA STATE DEPARTMENT OF
TRANSPORTATION AND DEVELOPMENT

MR. CHAIRMAN, I AM ART THEIS, CHIEF ENGINEER, OFFICE OF PUBLIC WORKS, DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, STATE OF LOUISIANA. MY COMMENTS TODAY ARE TO SUMMARIZE OUR WRITTEN BRIEF IN BEHALF OF THE STATE OF LOUISIANA AND THE ASSOCIATION OF LEVEE BOARDS OF LOUISIANA. THESE COMMENTS ARE IN SUPPORT OF THE BUDGET ALLOWANCE AND OUR REQUEST PRIMARILY IN REGARD TO THE MISSISSIPPI RIVER & TRIBUTARIES PROGRAM IN LOUISIANA.

IN DISCUSSING THE PROPOSED BUDGET FOR THE MR&T PROGRAM IN LOUISIANA, WE ARE CERTAINLY AWARE OF THE FACT THAT THE FEDERAL GOVERNMENT RECOGNIZES THE NEED TO MAINTAIN THE INTEGRITY OF THE OLD RIVER COMPLEX SEPARATING THE MISSISSIPPI RIVER FROM THE ATCHAFALAYA RIVER. THE FUNDING LEVEL THAT IS EXPRESSED INDICATES THIS AS A HIGH PRIORITY ITEM IN THE CIVIL WORKS PROGRAM. IN ADDITION TO THIS, HOWEVER, I WOULD LIKE TO POINT OUT OTHER PROGRAM DEFICIENCIES.

WE SHARE THE DESIRE OF CONGRESS AND THE PRESIDENT TO REDUCE DEFICIT SPENDING, TO STRENGTHEN THE ECONOMY, AND TO INCREASE THE NATION'S DEFENCES. THERE CAN BE NO HIGHER PRIORITY THAN THESE ITEMS. WE DO, HOWEVER, HAVE PROJECT NEEDS IN LOUISIANA FOR FLOOD CONTROL THAT ARE OUR HIGHEST PRIORITY AND WE BELIEVE SHOULD RECEIVE SPECIAL CONSIDERATION FOR INCREASED FUNDING LEVELS.

LOUISIANA, BEING THE DOWNSTREAM STATE IN THE MISSISSIPPI VALLEY, IS NOT AS FORTUNATE AS OUR UPSTREAM NEIGHBORS IN HAVING OUR LEVEES AND FLOOD CONTROL SYSTEM CONSTRUCTED TO THE DEGREE IT CAN WITHSTAND A PROJECT FLOOD. WE HAVE HUNDREDS OF MILES OF DEFICIENT LEVEES WITH SOME AS MUCH AS 6 FEET BELOW PROJECT GRADE. WITH AS MUCH AS 2/3 OF OUR POPULATION DEPENDENT UPON THIS PROTECTION, IT IS IMPERATIVE THAT THIS PROJECT PROCEED WITH ALL DUE HASTE. THREE MAJOR FLOODS IN THE LAST 10 YEARS HAVE HIGHLIGHTED THE URGENCY OF THIS PROGRAM.

THE ATCHAFALAYA BASIN FLOODWAY MUST CARRY ONE-HALF THE PROJECT DESIGN FLOOD BELOW THE LATITUDE OF OLD RIVER. THIS FLOODWAY LEVEE SYSTEM CAN CONTAIN ONLY 65% OF ITS PORTION

OF THE PROJECT FLOOD. WE BELIEVE THAT AFTER OVER 50 YEARS OF CONSTRUCTION THAT WE CAN NO LONGER DEPEND UPON MINIMUM APPROPRIATIONS TO COMPLETE THIS FLOODWAY LEVEE SYSTEM. WE ARE, THEREFORE, REQUESTING THAT THE FEDERAL GOVERNMENT UTILIZE THE FULL CAPACITY OF THE CORPS OF ENGINEERS AND REQUEST YOU APPROPRIATE \$48,300,000 FOR THIS PURPOSE. THIS EXCEEDS THE PRESIDENT'S RECOMMENDATION BY SOME \$20,000,000, HOWEVER, AT THE CURRENT RATE OF SPENDING AND ANTICIPATED COMPLETION AFTER THE YEAR 2000, WE BELIEVE THAT INCREASED EFFORTS ARE WARRANTED.

THE MAINLINE MISSISSIPPI RIVER LEVEES ARE ALSO HIGHLY DEFICIENT AND WE ARE ASKING THAT THE CORPS OF ENGINEERS CAPABILITY BE EXERCISED IN THIS AREA AND THAT THE APPROPRIATION BE INCREASED TO \$39,500,000 IN LIEU OF THE RECOMMENDED \$31,000,000.

FOR THE TENSAS BASIN PROJECT WE ARE ASKING THAT THE APPROPRIATION BE INCREASED TO \$32,800,000 IN LIEU OF THE RECOMMENDED \$20,300,000. THE ADDITIONAL FUNDS WOULD BE SPENT AS FOLLOWS: FOR CONSTRUCTION OF THE TENSAS-COCODRIE PUMPING STATION, \$8,000,000; FOR CONSTRUCTION OF TWO (2) LEVEE ENLARGEMENT ITEMS, \$3,000,000; AND FOR CONSTRUCTION OF TWO (2) NEW LEVEE ITEMS IN THE SICILY ISLAND AREA, \$1,500,000. THIS IS IN AN AREA SUBJECT TO BACKWATER FLOODING FROM THE MISSISSIPPI RIVER AND CONSTRUCTION OF THESE ITEMS WILL DO MUCH TO ALLEVIATE FLOODING IN THIS AREA.

THESE ARE ONLY THREE PROGRAMS IN LOUISIANA FOR WHICH WE ARE ASKING INCREASED FUNDING LEVELS. THE REMAINDER OF THE PROGRAMS ARE LESS URGENT AND WE ARE, THEREFORE, WILLING TO ABIDE BY THE PRESIDENT'S RECOMMENDATION. THESE THREE CRITICAL NEEDS, AS WELL AS ALL OF THE OTHER PROJECTS IN LOUISIANA, ARE MORE FULLY DISCUSSED IN THE BRIEF WE HAVE SUBMITTED TODAY.

WITH THE PERMISSION OF THE COMMITTEE, I WOULD ALSO LIKE TO SUBMIT FOR THE RECORD A WRITTEN STATEMENT ON APPROPRIATIONS FOR NAVIGATION, HURRICANE PROTECTION AND WATER RESOURCES PROJECTS IN LOUISIANA OTHER THAN IN THE MISSISSIPPI AND RED RIVER BASINS. THIS STATEMENT SUPPORTS, IN GENERAL, THE PRESIDENT'S RECOMMENDATIONS FOR THESE PROJECTS, WITH THE EXCEPTION OF THE AREA OF OPERATION AND MAINTENANCE OF NAVIGATION WATERWAYS. THESE FUNDS ARE BEING SEVERELY

REDUCED IN AT LEAST SEVEN (7) WATERWAYS IN LOUISIANA, TO ONLY ABOUT 3 PERCENT OF THE 1982 APPROPRIATION. THIS WILL REQUIRE SHUTTING DOWN AND PLACING IN CARETAKER STATUS THE TWO (2) LOCKS ON THE OUACHITA RIVER AND ONE (1) LOCK EACH ON FRESHWATER BAYOU AND BAYOU TECHE, ALONG WITH TWO MAJOR CONTROL STRUCTURES AT SCHOONER BAYOU AND CATFISH POINT, AND DELETING ALL MAINTENANCE DREDGING ON THESE WATERWAYS.

WE UNDERSTAND THIS ACTION TO BE RELATED TO THE ADMINISTRATION'S DESIRE TO HAVE ADOPTED A PLAN FOR USER CHARGES AS A MEANS OF FINANCING THIS WORK. WHILE WE ARE NOT AT THIS POINT TOTALLY OPPOSED TO THE CONCEPT OF USER CHARGES, WE ARE TOTALLY OPPOSED TO HOLDING THESE PROJECTS HOSTAGE AS A MEANS OF OBTAINING THEIR ADOPTION. WE REQUEST THE RESTORATION OF THESE FUNDS IN ACCORDANCE WITH THE AMOUNTS SHOWN IN OUR WRITTEN STATEMENT SO THAT THESE WATERWAYS CAN CONTINUE TO OPERATE IN FISCAL YEAR 1983.

WE WILL APPRECIATE YOUR CONSIDERATION OF THESE CRITICAL PROGRAM NEEDS AND WISH TO THANK YOU FOR ALLOWING US THIS OPPORTUNITY TO DISCUSS THEM WITH YOU TODAY.

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
OFFICE OF PUBLIC WORKS

The Louisiana Department of Transportation and Development Office of Public Works, has been designated by Governor David C. Treen to represent the State in the planning and orderly development of our water resources. This statement is presented in behalf of the State of Louisiana and contains endorsements and recommendations for Fiscal Year 1983 appropriations for Louisiana items included in the Mississippi River and Tributaries Project.

In making the following recommendations, the State of Louisiana supports, in general, the budget recommendations of the President for Fiscal Year 1983, with some exception. We agree that a balanced budget is a worthy objective, but at the same time point out that water resources projects are probably the most worthwhile projects receiving federal funding and have to stand cost justification studies other projects are not required to undergo. We ask that this fact be considered when the final funding decisions are made.

MISSISSIPPI RIVER AND TRIBUTARIES
SUMMARY OF RECOMMENDED APPROPRIATIONS

ITEM	BUDGET ALLOWANCE	LOUISIANA REQUEST
Atchafalaya Basin, LA	\$ 28,500,000	48,300,000
Bayou Cocodrie & Tributaries, LA	100,000	100,000
Channel Improvement, AR, IL, KY, LA, MS, MO & TN	51,800,000	51,800,000
Mississippi River Levees, AR, IL, KY, LA, MS, MO & TN	31,000,000	39,500,000
Old River, LA	54,800,000	54,800,000
Teche-Vermilion, LA	2,271,000	2,271,000
Tensas Basin, AR & LA	20,300,000	52,800,000
STUDIES	1,165,000	1,165,000
OPERATION & MAINTENANCE	61,652,000	61,652,000

NOTE: Listed above are only those items in Louisiana and directly affecting the State. We realize that there are others outside of Louisiana that are vitally important to the Project and in these areas, we endorse the recommendations of the Lower Mississippi Valley Flood Control Association.

ATCHAFALAYA BASIN

(Budget: \$28,300,000 Request: \$48,300,000)

This project is a Main Stem component of the flood control plan for the Mississippi River and Tributaries Project. The Mississippi River can safely carry only one half of a project flood, or 1,500,000 cubic feet per second, below Old River; the other 1,500,000 cubic per second must be discharged through the Atchafalaya Basin. The levees which must confine this flow to the basin are now deficient because they have settled below original design grade due to consolidation of the underlying soils, and the design has been revised upward. This places the lives and welfare of 650,000 people and their property and improvements in 13 parishes in the immediate vicinity of the Atchafalaya Floodway in jeopardy each flood year. The tax assessment records indicate the value of potential flood losses to be approximately \$8 Billion not including public improvements. Over the past half-century we have supported the Mississippi River and Tributaries Project and have agreed that construction offlood protection works should start upstream and progress downstream. As a result, the Mississippi River and Tributaries Project is now more than 90% complete in states upstream from Louisiana while the levees in the Atchafalaya Basin can contain only 65% of the project flood. Completion of this project should not be delayed in the least way. We are, therefore, requesting that funding exceeding by \$20 million the amount the President has recommended be appropriated for this project in Fiscal Year 1983. The requested amount would utilize the full capability of the U. S. Army, Corps of Engineers.

MISSISSIPPI RIVER LEVEES

(Budget: \$31,000,000 Request: \$39,500,000)

The Mississippi River Levees Project is also a Main Stem component in the plan for improvement of flood control on the Mississippi River. The various components are inseparable when calculating a composite benefit cost ratio for the Main Stem Project. In this case, the remaining costs to remaining benefit ratio is 16.5 to 1, containing approximately \$3 billion in total benefits. The levee system provides protection to 23,600 square miles and provides partial protection of an alluvial valley subject to flooding from a Project Flood. In addition to the highly developed and productive agricultural areas, these levees provide protection to many large and varied industries, as well as large metropolitan areas. As stated before, in reference to the Atchafalaya Basin the degree of completion of the Mississippi River and Tributaries Project in Louisiana is substantially below that of up-stream states. Furthermore, revisions in the project flow line resulting from the experience of the 1973 flood indicate how imperative it is that this levee enlargement work be completed as early as possible. We are therefore requesting that funding exceeding by \$8.5 million the amount the President has recommended be appropriated for this project in Fiscal Year 1983. The requested amount would utilize the full capability of the U. S. Army, Corps of Engineers on this portion of the project.

TENSAS BASIN RED RIVER BACKWATER AREA

(Budget: \$20,500,000 Request: \$32,800,000)

The Red River Backwater Area is that area near the point where the Mississippi River, the Black River, and the Red River came together. The area is subject to extensive backwater flooding from these three rivers each flood reason. Solutions of flooding problems in this area is long overdue. We are, therefore, requesting that funding exceeding the President's recommendation by \$12,500,000 be appropriated for this project in Fiscal Year 1983. The additional funds would be utilized as follows: construction of the Tensas-Cocodrie Pumping Station, \$ 8,000,000; construction of two (2) levee enlargement items, \$3,000,000; construction of 2 new levee items in the Sicily Island area, \$1,500,000.

OLD RIVER, LOUISIANA

(Budget and Request: \$54,800,000)

This project is recognized as the number one priority item in the entire civil works program. The Old River project prevents the Mississippi River from changing its course to the Atchafalaya. Should this occur, the cities of Baton Rouge and New Orleans and many lesser communities would suddenly be without sufficient quantities of fresh water for domestic and industrial needs. A large investment by the United States in flood control and navigation facilities would be lost. Since the project is one of the Main Stem components for flood control on the Mississippi River, it is inseparable from the other components when calculating a composite benefit-to-cost ratio for the Main Stem project. The ratio of remaining benefits to remaining cost is 16.5 to 1, or more than \$3 Billion in benefits through flood control, navigation, area redevelopment and recreation. The requested amount of \$54,800,000 will initiate final phase construction of the Auxiliary Control Structure, continue engineering and design, and cover supervision and administration for the project. Since it is of the utmost importance to complete this project on schedule and the funding requested in Fiscal Year 1983 is only the minimum necessary to meet the presently scheduled completion dates, we request that any additional funding above the President's budget and above the amounts requested for the Atchafalaya Basin and Mississippi River Levees items above that becomes available, be applied first to this important project to insure timely completion.

CHANNEL IMPROVEMENTS

(Budget and Request: \$51,800,000)

Channel improvements and stabilization provide protection of levees and the many improvements behind them, as well as preventing unsatisfactory alignment where the river's bank is unstable. This project is also a Main Stem component of the flood control improvement program for the Mississippi River and the benefits are the same as for the other main stem components. The Mississippi River and Tributaries Project above Old River is about 80 percent complete but only about 50 percent complete below Old River. Because of the improvements upstream, increased flows are a major problem in Louisiana where the project is lagging. We concur with the President's budget recommendation, but request that should additional funds above the President's request become available, this item should be considered for the appropriation of these funds.

LOCAL CONTRIBUTIONS FOR FLOOD CONTROL IMPROVEMENTS

Historically, Louisiana has always done its part in cooperation with the Federal agencies concerned with flood control. The Louisiana State Board of Engineers, the forerunner of the Office of Public Works, was created in 1879 the same year as the Mississippi River Commission to coordinate the planning and construction of the required flood control facilities to protect the State. Since that time, local expenditures for flood control have exceeded \$729,000,000. This amount adjusted to 1979 dollars represents expenditures in excess of \$5.3

Billion. Nearly one-half of the potential flooded area of the Lower Mississippi River Valley lies in Louisiana. Local expenditures for flood control have increased with the growth of the valley. This record not only meets, but exceeds any National Water Policy local participation requirements ever put into practice.

The State of Louisiana, its Office of Public Works, in particular, wishes to commend the Appropriations Sub-Committees on Energy and Water Development and express our appreciation for the foresight and understanding exhibited in the past of the need for authorizing adequate levels of appropriations for water resources projects which are vital to the national interest. We solicit your further consideration of the recommendations presented herein.

STATEMENT OF DAN FELTON, JR., L'ANGUILLE IMPROVEMENT DISTRICT NO. 1 OF ARKANSAS

This Improvement District was legally constituted in December of 1979 and a letter of intent to sponsor the L'Anguille River Project was provided to the Memphis District Corps of Engineers on January 14, 1980. There is a dire need for flood relief along the L'Anguille River in Cross, Woodruff, St. Francis, and Lee Counties in Arkansas, wherein there is contained some 380,000 acres that are affected within the proposed District.

Congress appropriated \$150,000.00 for fiscal year 81 and \$350,000.00 for fiscal year 82. The L'Anguille Project is included in the President's budget for fiscal year 83 and the Memphis District Corps of Engineers has expressed a capability of \$550,000.00. It is important that this money be appropriated for the Corps to continue its re-study efforts on this previously authorized Project.

There is a somewhat unique problem in the L'Anguille Basin that occurs because of late spring and early summer flooding that prohibits or delays the planting of crops, as well as late summer and fall flooding that prohibits or delays the harvesting of matured crops. There have been numerous instances over the past three years where entire fields of matured crops have rotted because harvesting was impossible. The Commissioners for the Improvement District have the full support of the entire Arkansas Delegation who represent this District, both Senators Bumpers and Pryor and Congressman Alexander.

If this re-study effort is not completed and plans implemented to prevent the duration of flooding in the L'Anguille River Basin area then there will be an enormous loss of soil through erosion and washing, as well as unmitigated damage to woodlands and wildlife habitats, therefore the Commissioners of the L'Anguille Improvement District No. 1 of Arkansas urge the appropriation by Congress of \$550,000.00 for fiscal year 83 in order to fund the expressed capability of the Corps.

STATEMENT OF H. A. BOUGHTON, PRESIDENT, BOARD OF COMMISSIONERS, TENSAS BASIN
LEVEE DISTRICT

I am Al Boughton, President, Board of Commissioners, Tensas Basin Levee District. Gentlemen, it is a pleasure to appear before your Committee to present to you information concerning our most urgent needs in matters of flood control and drainage.

The Tensas Basin Levee District is large in area, situated in eight Louisiana parishes between the Arkansas-Louisiana State Line on the north and the Red River on the south. To the west, we adjoin the hills and on the east, we join the Fifth Louisiana Levee District, which borders the west bank of the Mississippi River. Our Levee District, along with the Corps of Engineers and the State of Louisiana, has been actively engaged in a flood protection and drainage system since the late 1800's.

While we can assume a confident posture about the very fine flood protection that we enjoy in our District from headwater flooding, we still have areas in what we call the Red River Backwater Area which desperately

need protection. Our two major areas of concern remain the Sicily Island Levee Project and the Bushley Bayou Levee Project.

SICILY ISLAND LEVEE

The Sicily Island Project is authorized and the design report has been completed and approved for construction. To date, \$500,000 has been appropriated and is to be utilized for advanced engineering, preparation of plans and specifications, and acquisition of rights-of-way. The U. S. Army, Corps of Engineers, has expressed the capability of proceeding with right-of-way acquisition during the latter months of this fiscal year and the capability to put the first item under construction during fiscal year 1983. In order to fund this first item, Item 1A (Bayou Louis Control Structure, Closure and Outfall Channel); \$1,000,000 is required. The Corps of Engineers has, also, expressed the capability of placing the first levee item under construction, Item 1-B, which consists of the enlargement of an existing Levee Board levee. The construction cost for this item is \$500,000. The total amount requested by this Levee District for the Sicily Island Project for fiscal year 1983 is \$1,500,000.

LOCAL COST SHARING

The Tensas Basin Levee District is strongly opposed to policies and positions adopted during the past few years by the Army Chief Engineer's office relating to local cost sharing in certain Mississippi Valley flood control projects. As a result of former President of the United States Jimmy Carter's water policy message to Congress of June 6, 1978, the Chief of Engineers has interpreted that certain major flood control projects should be funded under the National Cost Sharing Standards enacted by the June 22, 1936, Flood Control Act (P. L. 74-738) for flood control projects outside of the Mississippi Valley area. This action has resulted in long and unwarranted delays to the Bushley Bayou Levee Project.

The Tensas Basin Levee District stands on the premise that the need for flood control in the backwater areas and lower tributaries of the Mississippi River are part of a national flood control problem and should be solved with federal funding. Further, due to the magnitude of this project, non-federal cost sharing places this project out of reach for local authorities. We would, also, remind you that each additional year that the project is put off, we add to the chance of allowing costly flood damages to occur.

STATEMENT OF BURRELL B. FAIR, CHIEF ENGINEER, ST. FRANCIS LEVEE
DISTRICT OF ARKANSAS

My name is Burrell B. Fair, I live in West Memphis, Arkansas and I am Chief Engineer of the St. Francis Levee District of Arkansas. I am representing the Board of Directors of that District and the landowners within the District in support of the appropriation for the St. Francis Basin Project and other federally funded water resource projects which affect the area.

I am here with a group from the Lower Mississippi Valley Flood Control Association, an organization of Levee and Drainage Districts, Port Authorities and other public bodies which provide local cooperation for federal water resource projects in the Lower Mississippi Valley. We are requesting a total appropriation of \$228,350,000 for the projects under Mississippi River and Tributaries for Fiscal Year 1983. This is the amount included in the President's budget plus \$6,350,000 for two additional items which are fully explained in the statement presented by Mark Simmons in behalf of the Association.

Under the MR & T heading, the appropriation for the St. Francis Basin Project is of special importance to the group I represent. We are requesting \$5,730,000 for the St. Francis Basin and this, also, is the amount included in the FY 1983 Budget. Although this amount will allow only the absolute minimum necessary to continue token progress on the project, it is not our desire to press for spending increases in view of the existing fiscal situation.

Last year, in support of the effort to reduce government spending, we did not request an increase over the \$11,800,000 budgeted for the St. Francis Project. We appreciate the fact that Congress did appropriate that amount. However, this year, the budgeted amount is almost exactly half of last year's amount and is not nearly what is needed for adequate progress on the project. Likewise, it is far below the amount which the Corps of Engineers is capable of spending in FY 83.

This leads us to believe that our efforts to recognize the fiscal problems of the government are being mistakenly interpreted as lack of support for the work needed to complete the St. Francis Project. The needs of our area are as great as they ever were and the problems caused by inadequate capacity of our major drainage outlets will continue until the remedial work is accomplished.

We are again limiting our request to the amount included in the budget, \$5,730,000. If the committee does recommend increases for other projects, we believe the St. Francis Basin should receive the same treatment and be allotted funds in addition to the inadequate amount budgeted.

We ask for the same careful and considerate attention to our needs as you have given us in the past.

STATEMENT OF JOSEPH F. MOONEY, JR., CHIEF ENGINEER, BOARD OF LEVEE COMMISSIONERS, YAZOO-MISSISSIPPI DELTA

I am Joseph F. Mooney, Jr. of Clarksdale, Mississippi. As Chief Engineer for the Board of Levee Commissioners for the Yazoo-Mississippi Delta, I have the privilege of submitting this statement on behalf of the Board and of the citizens of the Yazoo Basin. We join the Lower Mississippi Valley Flood Control Association in supporting the Fiscal Year 1983 Budget of \$288,350,000 for the Mississippi River and Tributaries Project. Our statement will particularly support the portions of the budget allocated to items of work in the Yazoo Basin.

Again this year, the citizens of our area accept the necessity of limiting the amounts of money budgeted to flood control and drainage in order to assure our nation of a sound monetary condition. Because the Congress has traditionally funded such work at a reasonable level, we know that you believe in the need and the benefits derived from these projects. We know that you are well aware that these works return many fold to the national economy in

terms of damages prevented and in actual goods produced. These projects are of vital importance locally and nationally; therefore they should be funded at the highest levels consistent with current economic constraints.

The Yazoo Basin is a fertile agricultural area producing a variety of foods and fibers for domestic consumption as well as for foreign trade. Around the small cities and towns, light industries have developed to further process the local goods, and to provide employment for local populations. The products of the Yazoo Basin contribute greatly toward a favorable balance of trade.

The very characteristics that make this area so highly productive, flat land and high rainfall, make adequate flood control and drainage essential to the realization of that production. The mainline levee system controls the overflows of the Mississippi River and is the keystone to the development of the Yazoo Basin. Excess rainfall in the 13,400 square mile basin drains into the Yazoo system on the east part of the basin and into the Sunflower system on the west part of the basin. The Sunflower-Steele Bayou work significantly affects the City of Greenville, a bustling port on the Mississippi River. The Upper Yazoo Projects is the principal outlet for the northernmost counties of the Delta, and much local interest work must wait until the UYP work is far enough upstream to provide an adequate outlet.

The relationship between the elements of the Yazoo Basin Plan is complex and the realization of full benefits of any part is frequently dependent upon the progress of work in other elements. As mentioned, the ability of local interests to provide their own protection and development works themselves is frequently limited by the progress of the major elements of the plan. In works of this nature, there is normally an optimum rate of progress below which the unit of work achieved per dollar invested falls off noticeably. For these reasons, we believe it is to the best interests of our nation and all concerned

that the budget cutting process be used with great restraint on the MT & T Project. Further, as soon as the economy improves, the cuts in the MR & T appropriations be among the first to be restored.

We thank the Congress for the sound investments you have made in years past. We thank the Congress for the financial responsibility you are following today. We thank the Congress because we believe our future is safe in your hands.

For now, we urge your approval of the FY 1983 Budget appropriation of \$288,350,000 for the Mississippi River and Tributaries Project.

STATEMENT OF BURKETT H. MARTIN, PRESIDENT, LOWER YAZOO RIVER BASIN
DISTRICT IN MISSISSIPPI

I am Burkett H. Martin, an attorney of Vicksburg, Mississippi and am President of the Lower Yazoo River Basin District in Mississippi.

I am pleased to present this statement on behalf of the Lower Yazoo River Basin District.

The Yazoo River Navigation Project, authorized by Congress in the 1968 Rivers and Harbors and Flood Control Act, provides for improving the navigable waterways of the Yazoo River from its mouth on the Mississippi River to the river port of Greenwood, approximately 100 miles upstream. The recommended plan of improvement calls for a channel with a 9-foot depth and 150-foot minimum bottom width between the mouth of the river and Greenwood. The physical features include a lock and dam near the mouth, channel realignment and dredging, raising the control structure at the upper end, and modification of Sardis Reservoir to provide additional storage capacity of water supply for navigation, and bridge alterations.

This project is necessitated by the tremendous increase in river traffic on the Yazoo River in recent years serving

the Mississippi Delta. While the demand for river transportation has increased, the water level in the river is sufficient less than 50 percent of the time to accommodate a modest amount of this traffic. The industry and agriculture that would otherwise utilize the river are forced to turn to more expensive surface transportation. The savings to agriculture and industry which will result from this project will be great. These benefits were foreseen by the Congress in approving this project in 1968.

The reasons for initiating the project now are even more compelling than they were in 1968. Delays in completion will no doubt increase the cost of the project and impede industrial and agricultural growth and development of the area which the project will serve.

The District has raised in excess of \$1,000,000.00 by way of local taxes for the acquisition of rights of way, etc., and we have spent approximately one-fourth of that amount for rights of way in connection with the bridge across the Yazoo River at Belzoni, Mississippi. This bridge is approximately Seventy-five percent complete, and it is expected that it will be completed in 1983.

The President's budget for FY 1983 contains the sum of \$1,516,000.00 for completion of the Belzoni bridge and \$95,000.00 for Engineering and Design for the navigation project. The Corp of Engineers has the capability for these amounts.

We greatly appreciate the support which the District has received from the Senate for this project in the past, and we respectfully request that the figures as contained the budget FY 1983 be approved.

INTRODUCTION OF SUPPORTING WITNESSES

Senator COCHRAN. We realize there are other representatives here with the Lower Mississippi Valley Flood Control Association.

Senator STENNIS. Mr. Chairman, before you leave these witnesses—

Senator COCHRAN. I am not going to leave them. I am going to introduce a couple other people. We have some people from Tennessee and Missouri here as well. We would like to welcome them and ask them to please stand and be recognized. [Group standing.]

We appreciate all of you who are here with the association. We appreciate very much your remarks. I particularly want to thank Newman Bolls for reminding me about the baptism of water I had in 1973. As a matter of fact, as a newly elected Member of the House of Representatives, to Congress, one of the first things that happened after I was elected was that we had the biggest flood in Mississippi since 1972. I found Newman over there in hip boots cranking pumps, piling sandbags. We weren't quite dressed like the President was the other day when he was in Indiana. But we were working hard. It was a very memorable experience for me to see the awesome amount of water that was dumped into our State and down the lower valley that year as a result of that flood. Then we had two other floods right after that in 1974 and 1975. As a matter of fact, one fellow said, "Well, that is what you all get for electing a Republican Congressman." [Laughter.]

And then, of course, they elected me to the Senate in 1979, and we had a hurricane that hit the gulf coast. [Laughter.]

And then a drought hit the delta. Senator Stennis and I had to go down to the gulf coast and see about that. The President came down. I don't know what they think now.

Senator BUMPERS. People don't wake up. [Laughter.]

Senator COCHRAN. We appreciate very much your help.

Senator Stennis, any comments?

STATEMENT OF HON. JOHN C. STENNIS, U.S. SENATOR FROM MISSISSIPPI

Senator STENNIS. Yes, Mr. Chairman. I want to express real pride in the presentation here that has been made by these last four witnesses representing this area and this association and the many problems that go with it. Their statements are just splendid. The record will reflect the true situation.

Let me make one remark. Since you fellows started telling stories, I am not going to be left out. [Laughter.]

In that 1973 backwater flood, the Yazoo backwater area, it happened that President Nixon was going to Mississippi to make a speech and invited me to go with him. And we swung him by that area to see that high water. We really flew down low and he got a good look at the situation. And there were the houses, the water had come on up to the lower window and on up and on up, just about at the top of the top sash. We just flew along, mile after mile. He said, "My goodness, will those people ever come back to their homes?" I said, "Mr. President, they never have left. They are out there somewhere." [Laughter.]

That pretty well personifies the courage, the tenacity, and the hold-on spirit you people have, those people who live in those areas. I was really proud of them.

REDUCTION IN O&M FUNDING

Let me say one word now about the \$150 million that was left out entirely from operation and maintenance. That is the money that is taking care of the little ports—the small harbors and so forth.

Gentlemen, we will just be very frank about it. I just feel certain that the President of the United States didn't order that done. He just couldn't have a chance to know personally of it, about items of that kind. It was put in there by someone that was trying to carry out some other objective.

The first thing that happened to it is it went before another committee, the authorizing Committee of Public Works. It was represented there by members all across the Nation, many of them living miles and miles and miles from any port. They unanimously struck that provision they just weren't going to recommend it or begin to consider recommending it. It shows how impractical it was after all.

We are not magnifying our job here, but somebody certainly has to take a second look at these matters. The idea of just leaving our ports suspended in mid-air until an additional user fee or tax of some kind is agreed to and then you can spend it on your port; now that is the substance of what they said. Now you have to do that by September 30 if you are going to comply with that budget recommendation. Well, we won't be on page 2 of the budget by September 30, probably, the way things have been going here. [Laughter.]

But we have to take this second look, and this illustrates it.

PREPARED STATEMENT

Now, I have taken too much of my time telling my story. I have a brief statement, Mr. Chairman, and with your permission I will simply put the rest of it in the record.

Senator COCHRAN. Of course. It will be included in the record, Senator. We thank you very, very much.

[The statement follows:]

STATEMENT OF SENATOR JOHN C. STENNIS

Mr. Chairman, I, too, would like to welcome this fine group that has come to testify in support of the many worthy project in their area. It is good to see so many old friends again. I know most, if not all, these projects well. I believe in them, I support them, wherever they are. As I have stated numerous times, that from the vantage point on many years on this committee and in the Congress. The investments we make in our water projects are among the wisest we make. These capital investments that make possible and improve the production of much of our food and fiber, protect our homes and factories from the ravages of floods, provide water to drink, generate electricity, and provide efficient transportation must continue to be made, if this country is to continue to grow and prosper as all of us desire. The budget this year for water projects is austere as is no doubt fitting in this time of fiscal difficulty. I would dispute those who say water projects are not receiving their fair share of budget cuts. I note, for example, the Mississippi portion of the Mississippi River and tributaries projects has been reduced from \$41.6 million in 1982 to \$29.3 million in 1983.

I would especially express my concern that the administration proposes to withhold some \$150 million countrywide for the maintenance of many completed projects, unless the Congress passes some sort of user taxes. I consider this sort of proposal completely unacceptable and am sure the Congress will see fit to restore the necessary funds to properly maintain our ports and waterways. Again, I look forward to hearing your always well-prepared testimony.

ARKANSAS WATER DEVELOPMENT PROJECTS

STATEMENT OF HON. DALE BUMPERS, U.S. SENATOR FROM ARKANSAS

L'ANGUILLE RIVER BASIN, ARKANSAS

Senator COCHRAN. Senator Bumpers has joined the committee. We appreciate your being here, Dale, very much. You have a big crowd of Arkansas folks out there who have already been introduced. We appreciate the work you do here on the committee.

Senator BUMPERS. Mr. Chairman, if I may, there is a statement here regarding the L'Anguille, which has been mentioned here, by Dan Felton, Jr. I just want to indicate my strong support for that project and I hope the committee will continue to support this work.

I would also like to say to at least part of the delegation from Arkansas that I have two thoughts. No. 1, back when we were all big spenders, you know, spending \$1.2 billion on the Arkansas River navigation system, we used to spend money willy-nilly around here, but we only had a \$20 to \$30 billion deficit. But now that we are all cutting back on Federal spending, we all of a sudden have a \$150 billion deficit. So, I think we ought to start spending more and see if we can't get the deficit back down. [Laughter.]

The second thing I want to say is that, you know, I have been voting for that Tennessee-Tombigbee Waterway project ever since I have been here, and the second thing is I have never asked for anything in return. That all has to change. [Laughter.]

Here are two of the most powerful members on this committee and in the Senate, and they just take my vote on the Tennessee-Tombigbee for granted every year, and now this year I have to have another \$150,000 for the L'Anguille River basin. We have to keep the Red River Waterway on schedule. And we sure don't want any locks shut down on the Ouachita. So I just thought I would throw that out for whatever it is worth. [Laughter.]

Senator Johnston has always taken me for granted on everything he wanted. We are going to have to woodshed him and explain this thing to him. [Laughter.]

But I am very pleased, Mr. Chairman, to participate here. We have several delegations from Arkansas. They have all labored in the vineyard for so many years on these projects that are really so vitally important.

SOIL AND BANK EROSION PROBLEM

I am a strong proponent of these projects for a very simple reason. That is, one of the longest range problems and most desperate problems this country faces is bank erosion and conservation of the soil.

Down along the Red River especially, we lose so much acreage every year and will until that project is completed.

I can remember as a youngster going with my father out on the Arkansas River bank. He had a 200-acre farm. We raised spinach and crops like that on the farm. But I can remember seeing as much as 50 feet of the richest soil in the world, 50 feet at a time, just scale off in that river. So we slowly, surely are stopping all of that. That is the reason for my dedication to all of these things. I appreciate the opportunity to be with you this morning.

Senator COCHRAN. Thank you very much, Senator.

Senator Johnston?

Senator JOHNSTON. I just want to thank these witnesses for an excellent statement. I don't disagree with a word they said. I am just proud to endorse their statements.

Senator COCHRAN. Thank you again. Thank you all for being here and for all the presentations you made to the committee.

The subcommittee will take a brief 5-minute recess and then we will have the Ouachita River Valley Association.

[A brief recess was taken.]

OUACHITA RIVER NAVIGATION PROJECT

STATEMENT OF LLOYD PLATT, EXECUTIVE DIRECTOR, OUACHITA RIVER VALLEY ASSOCIATION

Senator COCHRAN. The committee will come to order. We will continue our hearing with the Ouachita River Valley Association, represented by its executive director, Mr. Lloyd Platt. We want to welcome you to the committee. We have a copy of your statement, Mr. Platt, which we appreciate very much. We will incorporate that in full in the record and invite you to make any summary comments or any other statement that you would care to make at this time. Welcome; please proceed.

Mr. PLATT. Thank you, Mr. Chairman.

My name is Lloyd Platt. I am the executive director of the Ouachita River Valley Association in Arkansas and Louisiana.

Part of the problems I was going to discuss have been discussed by the different groups who testified ahead of me. But the Ouachita River Valley Association is an organization that has been the public spokesman for water resource development in the Ouachita River basin since the turn of the century.

This year, due to the expense involved and our limited budget, we did not encourage a large number of our members to appear before you. We have some letters from members that we want to submit to the committee.

Senator COCHRAN. They will, of course, be entered in the record. We appreciate having those statements.

Mr. PLATT. The association is well aware of the need for the Nation to economize and to spread our water investment costs over a longer period. For these reasons, we accept the fiscal year 1983 construction figure offered by the Corps for the Ouachita River basin development.

The Corps is preparing, as Senator Johnston alluded to earlier, at the request of Senator Pryor, an added study effort on two barges coming down the river side by side. This information is going to be available this summer. It is genuinely believed by the members of this association that this new information will strengthen the case for designing and preparing the Ouachita River to operate with the four-barge tow.

REDUCTION IN O&M FUNDING

The Ouachita River navigation project is a multipurpose project. The project purposes include navigation and recreation, but are not limited to these. In fiscal year 1982, without the completion of the locks and dams at Calion and Felsenthal, the Corps was authorized \$3.5 million to operate and maintain the river. This money was used for dredging, recreation, and operation of the two completed locks and dams in Louisiana. For fiscal year 1983, we are advised this figure is to be \$536,000. However, no provisions are being made for either of the new locks and dams located at Calion and Felsenthal.

Just as a byline, Felsenthal is 99.9-percent complete. It will be coming on line in fiscal year 1982.

The fiscal year 1983 O&M figure is entirely too low. The Ouachita River Valley Association has acknowledged the need for belt tightening. We want to do our share of doing more with less, and we will. However, we do not want to endanger the entire project nor jeopardize the safe shipment of the multiple-launch rocket system to Europe or the civilian goods moving on the Ouachita River to various locations. An inadequately maintained river is an accident waiting to happen.

It is easy to suggest an O&M cut, but it is more difficult to justify the level at which a river basin should be maintained. In the case of the Ouachita in fiscal year 1983, another lock and dam is programmed to come on line and the new recreation component is scheduled to be operated. With these and other additives, it is believed that the fiscal year 1983 figure should at least equal the fiscal year 1982 appropriation.

If the locks and dams go into caretaker status, the river will not operate. It will close down. And when it goes down, the shippers of farm produce and other commodities will have to find other means to ship their goods.

Farmers who irrigate their farms will suffer. Flood control will be eliminated. The towns that depend on the river for water supply will be without. All hopes of hydroelectric power will be gone. And the river will be gone when you lock the locks up. So we are asking for the consideration of this committee, and it is not out of luxury. It is out of bare dire necessity.

Senator COCHRAN. Thank you very much. I am glad to have that statement and appreciate the expressions of your knowledge that I know will be of great benefit to us as we take a look at these budget requests this year.

Senator Stennis, any comments?

Senator STENNIS. Nothing further. Thank you for your statement.

Senator COCHRAN. Senator Johnston?

Senator JOHNSTON. I think Mr. Platt is right. I think we have to find this money for the Ouachita.

Mr. PLATT. If we don't, we are going to have a free-flowing river, and the water won't be deep enough to fish in. Thank you, Mr. Chairman.

Senator COCHRAN. Thank you very, very much for being here.

RED RIVER BASIN WATER RESOURCE PROJECTS

STATEMENT OF CHESTER WELLS, PRESIDENT, RED RIVER VALLEY ASSOCIATION

Senator COCHRAN. Next, we will hear from the Red River Valley Association which is represented by Chester Wells, president. He will present and coordinate the statements of several witnesses who we want to welcome: Mr. Homer Tanner, Jiff Hingle, John Stroud, Dewey Burchett, and Rogers Prestridge.

We want to welcome all of you here this morning and invite you to proceed, Mr. Wells, any way that you please.

Mr. WELLS. Senator Cochran, members of the committee, it is always a privilege and pleasure to appear here before this warm committee. We always feel we are members of the family when we get up here before you.

We are going to summarize our statements to make them as brief as possible. We would like to then answer any questions the committee may have of our witnesses. We have submitted numerous prepared statements for the record and we will only have about five speakers, mainly one from each of our member States: Arkansas, Texas, Oklahoma, and Louisiana.

In lieu of Mr. Hingle, who is the director of the Office of Public Works, DOT, State of Louisiana, we will have Mr. Herman Taylor, who is the vice chairman of the Red River Valley Commission in the State of Louisiana.

Senator COCHRAN. We want to welcome all of you.

Mr. Wells, we will include your summary table in the record in full and invite you to make any summary comments that you would like.

[The information follows:]

RED RIVER VALLEY ASSOCIATION

RED RIVER VALLEY AND TRIBUTARIES	APPROPRIATIONS	DATE 1983
Project and State (Amount in Thousands)	President's Budget 1983	RRVA Request 1983
PLANNING AND CONSTRUCTION		
Red River Emergency Bank Protection, LA, AR, OK & TX	0	6,800
Red River Levees and Bank Stabilization below Denison Dam, TX, AR, LA & OK	0	1,600
Red River Waterway Mississippi River to Shreveport, La.	30,000	90,000
Red River Bank Stabilization Index, AR to Denison Dam, AR, OK & TX	0	350
Arkansas-Red Basins Chloride Control, TX (Area VIII)	5,100	5,100
Arkansas-Red Basins Chloride Control, OK & TX (Remaining Red)	0	500
Bayou Bodcau and Tributaries, La	500	500
West Argus Levee, La	63	63
Big Pine Lake, Tx	0	5,000
Lukfata Lake, OK	0	350
Parker Lake, OK	0	100
Lake Wichita - Holliday Creek, Tx	190	250
Lower Red River Levees, La South Bank	800	1,100
McKinney Bayou, AR	240	240
Cooper Lake and Channels - TX	1,500	1,500
Red River Back Water Area, LA	0	6,110
Eastern Rapides Parish - South Central Avoyelles Drainage Project, LA	0	50
SUBTOTAL - PLANNING & CONSTRUCTION	38,393	119,613
STUDIES		
Red River Waterway Project, Shreveport, LA vicinity Index, AR	0	495
Red River & Tributaries above Denison Dam, OK & TX	100	350
Aloha, Rigolette Project, LA	0	150
Red River Below Denison Dam, Comprehensive Basin Study, to include Cane River Island Flood Control Study	250	455
Pine Creek Lake, Pine Creek, Oklahoma	0	255
Hugo Lake, Kirmichi River, Oklahoma	0	310
Shreveport, La to Daingerfield, TX	0	495
Little Cypress Creek, TX	240	515
SUBTOTAL STUDIES	590	3,025

RED RIVER WATERWAY, LA.

STATEMENT OF HERMAN TAYLOR, VICE CHAIRMAN, RED RIVER WATERWAY COMMISSION

Mr. WELLS. Mr. Chairman, I'll just call our first witness, Herman Taylor.

Mr. TAYLOR. Thank you, Mr. Chairman, members of the subcommittee.

My name is Herman Taylor. I am vice chairman of the Red River Waterway Commission. My comments concern only the Red River Waterway project in Louisiana.

LOCAL PROJECT SUPPORT

The Red River Waterway Commission in Louisiana has spent more than \$10 million for the purchase of over 14,500 acres of rights-of-way and other local participation requirements since the project began; \$2 million this past fiscal year. Additionally, our police juries, city governments, port authorities, and private businesses have spent significant amounts of money in preparation for the development of adequate port and harbor facilities, looking forward to the day when commercial navigation will be a fact on the Red River.

FUNDING REQUIREMENT

We thought we had an agreement with the Federal Government to construct this project, but instead it seems that our funding has been so drastically reduced that the Federal Government has all but abandoned this project. Rights-of-way acquisitions by the commission, requested by the U.S. Army Corps of Engineers, are now well ahead of construction, which has been substantially delayed this past year. Appropriations of an additional \$60 million over and above the President's proposed budget will allow, in addition to continued construction on lock and dam No. 1, the construction of 16 other project features, estimated to cost \$50 million, and the initiation of construction of lock and dam No. 2 is estimated at approximately \$10 million this fiscal year of 1983. Rights-of-way for all of these things have been acquired by our commission.

The State of Louisiana shares the goal of the President and the Congress of reducing deficits and balancing the national budget. We feel, however, that the additional funding we are requesting beyond the President's proposed budget will still result in a greatly reduced funding level from the previously proposed funding plan and is compatible with the administration's economic goals.

This project is bearing an excessive share of the budget cuts required to achieve these goals compared to other programs and water resource projects in other areas. We earnestly request equity in this matter and ask that this project be funded at the same level as the other projects and programs.

Senator COCHRAN. Thank you very much.

Mr. WELLS. Mr. Chairman, we had a little misunderstanding. I didn't realize Mr. Hingle was going to make a statement. We will call on Mr. Hingle at this time.

RED RIVER BASIN PROJECTS

STATEMENT OF JIFF HINGLE, ASSISTANT SECRETARY, OFFICE OF PUBLIC WORKS, LOUISIANA DEPARTMENT OF TRANSPORTATION

Mr. HINGLE. Mr. Chairman, members of the subcommittee, my name is Jiff Hingle. I am assistant secretary for the Office of Public Works, Louisiana Department of Transportation and Development, and chairman of the Louisiana Red River Waterway Commission.

My comments will be directed toward the appropriation for projects in and affecting Louisiana and the Red River basin that are made on behalf of the State of Louisiana.

RED RIVER LEVEES AND BANK PROTECTION BELOW DENISON DAM

I am especially concerned about projects for the Red River. There are several major authorized projects in the Red River basin in Louisiana, three of which are the Red River levees and bank stabilization below Denison Dam, the Red River emergency bank project, and the Red River Waterway project.

In recent years funding of the Red River emergency bank protection and Red River levees and bank stabilization below Denison Dam has been systematically reduced in anticipation of construction of the Red River Waterway project, which would accomplish some of the same objectives.

This trend should be halted and reversed or there may be no effective program for controlling the Red River.

Funding for the Red River Waterway project has been drastically reduced. The Red River levees and bank stabilization below Denison Dam project is the only comprehensive flood control program on the Red River containing authorization for construction of a variety of flood control measures. And, of course, there is no existing substitute.

This authorization provides for the construction of a first line of defense against flooding for the Red River Valley and its citizens. There is no money in the President's proposed budget for the Red River levees and bank stabilization below Denison Dam. We are asking that the sum of \$1.6 million be appropriated for this project in fiscal year 1983.

RED RIVER EMERGENCY BANK PROTECTION

The Red River emergency bank protection authorization exists for the purpose of constructing bank stabilization work as early as possible, instead of waiting many years and losing many millions of dollars in damage. Thousands of acres of land would be protected and the desirable alignment of the Red River would be preserved if this project continues to receive funding. Otherwise, far greater expenditures will be required in the future to accomplish the same goals. We are requesting that \$6.8 million be appropriated for this project in fiscal year 1983.

There are a number of other projects in the Red River basin for which funds were requested in the coming fiscal year. These project needs are addressed in our written material which has been filed for the record with your staff. We solicit your favorable consideration of these requests.

We also wish to be recorded in support of the basinwide request made by the Red River Valley Association and the representatives of our sister States testifying here today. Thank you for the opportunity to appear before you.

Senator COCHRAN. Thank you, Mr. Hingle.

[The statement follows:]

STATEMENT OF OFFICE OF PUBLIC WORKS, LOUISIANA DEPARTMENT OF TRANSPORTATION
AND DEVELOPMENT

RED RIVER BASIN

The Louisiana Department of Transportation and Development, Office of Public Works is the agency designated to represent the State of Louisiana for the coordinated planning and development of water resources including flood control, navigation, drainage, water conservation, and irrigation projects. Therefore, this statement is presented on behalf of Governor David C. Treen and the State of Louisiana. We are pleased to present the following endorsements and recommendations for Fiscal Year 1983 appropriations for Louisiana projects in the Red River Basin.

RECOMMENDED APPROPRIATIONS FOR RED RIVER BASIN PROJECTS
FISCAL YEAR 1983

LOUISIANA PROJECTS	BUDGET ALLOWANCE	LOUISIANA REQUEST
<u>Construction</u>		
Bayou Bodcau & Tributaries	\$ 500,000	500,000
Lower Red River-South Bank Red River Levees	800,000	1,100,000
Red River Emergency Bank Protection	-0-	6,800,000
Red River Levees & Bank Stabilization		
Below Denison Dam	-0-	1,600,000
Red River Waterway, Mississippi River to Shreveport, LA	30,000,000	90,000,000
<u>Planning</u>		
Red River Waterway, Shreveport, La. to Vicinity of Index, Ark.	-0-	495,000
West Agurs Levee, LA	63,000	63,000
<u>Studies</u>		
Aloha-Rigolette Area	-0-	150,000
Red River Below Denison Dam, Comp. Basin Study	250,000	455,000
<u>Operation and Maintenance</u>		
Bayou Bodcau Reservoir	650,000	650,000
Bayou Pierre	30,000	30,000
Caddo Lake	230,000	230,000
Red River Waterway, Mississippi River to Shreveport, LA	-0-	1,850,000
Wallace Lake	140,000	140,000

NOTE: The projects listed above are only those in Louisiana and directly affecting the State. We realize that there are others outside of Louisiana that are vitally important to the Basin and we endorse the recommendations of the Red River Valley Association.

RED RIVER WATERWAY, MISSISSIPPI RIVER TO SHREVEPORT
(Budget: \$30,000,000 Request \$90,000,000)

The Red River Waterway Project was authorized in 1968 by the 90th Congress only after it was given the usual series of examinations and tests of its cost-benefit aspects which are unique to water resources projects and are not required of other types of programs. The project was found to comply with these requirements and to be amply justified even though these analyses do not allow credit for some types of benefit which are none the less real. The increased availability of water supplies for municipal and industrial use and the hydro-power benefits of the project have not even been fully assessed. In spite of these omissions, the project was still found to be justified both from the economical and environmental view points.

The magnitude of local participation in this project is very large compared to similar projects in other areas. The Red River Waterway Commission of Louisiana has expended more than \$10 million for the purchase of over 14,500 acres of right-of-way and other local participation requirements since the project began. Additionally, local interests, through police juries, city governments, and port authorities have expended significant amounts in preparation for the development of adequate port and harbor facilities, looking forward to the day when commercial navigation will be a fact on the Red River and relying on our agreement with the Federal Government to construct the project.

Rights-of-way acquisitions by the Commission, requested by the U. S. Army, Corps of Engineers are now well ahead of construction, which has been substantially delayed this past year. Appropriation of the additional \$60 million requested will allow, in addition to continued construction on Lock and Dam Number One, the construction of 16 project features estimated to cost \$50 million and initiation of construction of Lock and Dam Number Two estimated at \$10 million in Fiscal Year 1983. Rights-of-way for the above have already been acquired by the Red River Waterway Commission.

Extensive benefits of the navigation project in the areas of flood control, bank protection, reduced sedimentation, water supply, fish and wildlife, and valley-wide developments will result from completion of the waterway. The Red River Basin is one of the last major river basins in the United States remaining to be developed and Louisiana has coordinated with the States of Arkansas, Oklahoma, and Texas in developing the navigation project. The area encompassing the Red River Basin in Louisiana and adjacent states is economically depressed and suffers chronically from low employment. Major industries have not developed in the basin because of lack of navigation facilities and the uncertainty of river bank stability.

The State of Louisiana shares the goal of the President and of Congress of reducing deficits and of balancing the national budget. We feel, however, that the additional funding we are requesting beyond the President's proposed budget will still result in a greatly reduced funding level from previously proposed funding plans and is compatible with the Administration's economic goals. This project is bearing an excessive share of the budget cuts required to achieve these goals compared to other programs and water resources projects in other areas. We request equity in this matter, and ask only that this project be funded at the same level as other projects and programs.

RED RIVER, EMERGENCY BANK PROTECTION

(Budget: -0- Request: \$6,800,000)

Thousands of acres of productive land are lost to the river each year and improvements must be relocated or abandoned when threatened by caving banks. Authorized under the River and Harbor Act of 1968, this emergency program treats major meanders and corrects misalignment prior to the time when normal construction funding becomes available. The funding requested will preserve the desirable alignment of Red River in addition to preventing the destruction of valuable property and improvements along the river. If this work is not done now, far greater expenditures will be required in the future to accomplish the same ends.

RED RIVER LEVEES AND BANK STABILIZATION BELOW DENISON DAM

(Budget: -0- Request: \$1,600,000)

The Red River Levees and Bank Stabilization Below Denison Dam Project is the only comprehensive flood control program on the Red River containing authorization for construction of a variety of flood control measures, and for which there is no existing substitute. The facilities constructed under this authorization are the first lines of flood protection for the Red River Valley and its citizens.

Because of planned construction schedules for the Red River Waterway Project, construction under this program was de-emphasized. Now that construction of the Waterway Project has been greatly delayed, it is imperative that the Red River Levees and Bank Stabilization Below Denison Dam program be resumed.

We request that the sum of \$1.6 million be appropriated for this project in Fiscal Year 1983.

ALOHA-RIGOLETTE AREA

(Budget: -0- Request: \$150,000)

During high stages on the Red River, the Aloha-Rigolette project provides protection to some 58,000 acres of alluvial land. Storm runoff from the Aloha-Rigolette area enters the Red River through a floodgate in the levee just above Pineville, Louisiana. The existing floodgate structure is inadequate and as a result, much of the area floods after moderate rainfall. Since construction of the project, the protected area has continued to develop agriculturally and as an urban area. The need for additional gates is even greater than in the past. Local interests requested that additional studies be made of the project with particular attention to the adequacy of the flood gate. As a result of these requests, a study was begun by the Corps of Engineers in Fiscal Year 1980. No funds are included in the Fiscal Year 1983 budget for this study. We request an appropriation of \$150,000 for this item in Fiscal Year 1983 so this important study can be continued.

LOCAL CONTRIBUTIONS FOR FLOOD CONTROL

Louisiana has always done its part in cooperation on flood control in the Red River Basin. Beginning with the creation in 1879 of the State Board of Engineers, the forerunner of today's Office of Public Works, the State has coordinated the flood control development program which has expended funds in excess of \$83,000,000. This expenditure when adjusted to 1979 dollars amounts to over \$515 million. This not only meets but exceeds any National Water Policy for local participation of which we are aware.

NAVIGATION, HURRICAN PROTECTION, AND WATER RESOURCES PROJECTS

The Louisiana Department of Transportation and Development, Office of Public Works, is the agency designated to represent the State of Louisiana for the coordinated planning and development of water resources including flood control, navigation, drainage, hurricane protection, water conservation, and irrigation projects. Therefore, this statement is presented on behalf of Governor David C. Treen and the State of Louisiana. We are pleased to present endorsements and recommendations for Fiscal Year 1983 appropriations to Louisiana projects. The projects listed herein are not contained in other separate statements by the Office on the Red River Basin or the Mississippi River and Tributaries.

In making the following recommendations, regarding construction, surveys and some selected operation and maintenance items, the State of Louisiana concurs in and supports the President's Budget recommendations for Fiscal Year 1983. These recommendations are made not because the projects are unworthy of higher funding levels, but because we agree that a balanced budget is a worthy objective and is in the best interests of the country at this time. However, we also feel that water resources projects are probably the most worthwhile and cost-effective projects in the Federal budget, having to meet stringent economic justification criteria not required of other programs. We ask that this be taken into consideration in the final decision making process to allocate the available funds.

PROJECT	BUDGET ALLOWANCE	AND LOUISIANA REQUEST
<u>CONSTRUCTION:</u>		
Aquatic Plant Control	\$	412,000
Grand Isle and Vicinity		5,000,000
Lake Ponchartrain and Vicinity		18,800,000
Larose to Colden Meadow		11,000,000
Mississippi River, Baton Rouge to the Gulf		900,000
Mississippi River, Gulf Outlet		2,000,000
Morgan City & Vicinity		350,000
New Orleans to Venice		3,450,000
Ouachita & Black Rivers		20,400,000
Leland Bowman Lock		14,000,000
<u>SURVEYS:</u>		
Gulf Intracoastal Waterway, LA & TX Section	\$	499,000
Mermentau-Vermilion, & Calcasieu Rivers & Bayou Teche		550,000
Mississippi River - Gulf Outlet		3,000,000
Mississippi River Navigation System-Adequate Mooring Facilities for Watercraft		50,000
Ouachita River Basin		1,586,000
Pearl River Basin		400,000
<u>OPERATION AND MAINTENANCE</u>		
Calcasieu River and Pass		10,970,000
Gulf Intracoastal Canal		10,070,000
Houma Navigation Canal		3,000,000
Mississippi River, Baton Rouge to the Gulf		19,580,000
Mississippi River Outlets, Venice		4,800,000
Pearl River		187,000
Removal of Aquatic Growth		1,600,000

We are seriously concerned about the funding of other operation and maintenance items, which is being cut in accordance with purely arbitrary guidelines, for the purpose of achieving a predetermined total reduction in Federal expenditures for operations and maintenance of navigation waterways, including the following:

<u>PROJECT</u>	<u>FY 1982 APPROPRIATION</u>	<u>FY 1983 BUDGET</u>	<u>FY 1983 REQUEST</u>
Atchafalaya River, Morgan City to Gulf of Mexico	6,953,000	0	5,700,000
Barataria Bay Waterway	1,710,000	0	1,700,000
Bayou Teche	303,000	62,000	500,000
Freshwater Bayou	1,610,000	77,000	770,000
Mermentau River	3,048,000	191,000	760,000
Mississippi River - Gulf Outlet	8,844,000	0	11,250,000
Ouachita & Black Rivers	3,690,000	536,000	4,622,000

The proposed cuts will require the closure and abandonment of four (4) active navigation locks and two (2) major control structures for the fiscal year 1983, and foregoing critically needed dredging work to maintain project channel depths in the above listed projects. Not only will this seriously hamper navigation movements in these channels, but will require greater expenditures for the same work at a future time due to increasing cost and restoration that will be made necessary by the interruption of regular maintenance.

We ask that the amounts shown in the request column above be provided to these projects so that routine maintenance can be continued and these projects can be operated as they were authorized to do.

We wish to express our thanks to the Appropriations Sub-Committees on Energy and Water Development of the House and Senate for allowing us to present this Brief on the needs of the State. Without reservation, practically every single project in Louisiana, which has been made possible through actions of these Committees, has shown a return in benefits many times in excess of that contemplated by the authorizing investigation. The projects which you fund affect the economy of not only Louisiana, but the Nation as a whole. The Office of Public Works appreciates accomplishments of the past and solicits your consideration of the appropriations requested for Fiscal Year 1983.

STATEMENT OF HOMER TANNER, EXECUTIVE DIRECTOR, NORTHEAST
TEXAS MUNICIPAL DISTRICT

Mr. WELLS. Our next speaker is vice president of the Red River Valley Association who represents the State of Texas, Mr. Homer Tanner.

Mr. TANNER. Mr. Chairman, members of the committee, my name is Homer Tanner. I speak to you as the executive member of the Red River Valley Association from the State of Texas. I am also the executive director of the Northeast Texas Municipal Water District, a political subdivision of the State charged with the orderly development of the water resources of a significant segment of northeast Texas.

My colleagues and associates have asked that I address you today to summarize our concern for the development of water resource projects in the Red River Valley.

The specific projects we appear here to support have been documented in detail. The Corps of Engineers has provided capabilities and funding levels. The association has provided additional evidence supportive of the valley's needs. The Texas Department of Water Resources has provided an in-depth analysis of the specific requests of Texas' interests and are herewith submitted for inclusion in the record. At this point I suggest the documentary evidence is overwhelming and for me to review again the specific projects in Texas would be redundant and time wasted.

LOCAL SUPPORT OF WATER RESOURCE DEVELOPMENT

What has not been documented, however, is the citizen support and effort that has culminated in the association's presentation here today. With me in the audience are individuals interested in water development that have been elected, appointed, employed by water-related organizations, the business community, the farming community, and people who are just plain motivated by a sincere desire to insure adequate water supplies for future generations, to save land from caving, and to reduce flooding or to enhance our inland waterway system.

We represent literally thousands of Texans, people whose lives and roots are in these communities, people who are making an effort to provide for the future water needs of their children and grandchildren. Many hundreds have provided input here encapsulated in brief written form for this presentation.

This region provides the world with pipe products, electronics, computers, energy technology, machine tools, and financial resources. Our farmers supply the Nation with a major production of cotton, grains, cattle, dairy products, vegetables, and other foodstuffs. The northern tier of Texas contains a vibrant segment of our Nation's economy. Exports of valley products are a significant percentage of our Nation's balance of trade. Regional population is growing at a rate matched by few in this great country. Water, its conservation and development, and the attendant preservation of our soil resources are of paramount importance, both now and for future generations.

NATURE OF FUNDING REQUEST

We are requesting project funding to enhance water quality through salt abatement programs that will ultimately result in vast quantities of not now available domestic and agricultural waters the entire length of the river. Flood control measures speak for themselves, as do the water supply projects. Bank stabilization and related projects also enhance the entire river and affect all those people we represent plus the many more in our neighboring States with whom we have joined efforts. Navigation of the waterway will provide an economic value to the valley and the Nation far beyond a purely dollars and cents analysis. The human values should be given paramount consideration.

There are overriding reasons otherwise set forth by my colleagues here today that speak to the need for continued funding of the navigation feature, and we in Texas wish to endorse unequivocally the request for restoration of significant construction funds.

The President has asked us all to share in balancing the national budget. We in Texas can accept that request and will gladly join hands with all other Americans of like mind in accepting reasoned budget cuts that would not cause deleterious effects to valuable ongoing projects.

We here representing the folks back home, so to speak, have for the past 2 years stated our support of the President's and the Congress' desires to reduce the Federal deficit, and in a show of good faith have refrained from requesting funding for frivolous projects, asking only for those dollars that can return a benefit to the country.

Thank you for listening to me.

Senator COCHRAN. Thank you very much.

[The statement referred to follows:]

LETTER FROM GOV. WILLIAM P. CLEMENTS, JR. OF TEXAS

April 1, 1982

The Honorable Mark O. Hatfield
Chairman, Subcommittee on Energy
and Water Development
Committee on Appropriations
United States Senate
1322 Dirksen Senate Office Building
Washington, D. C. 20510

Dear Senator Hatfield:

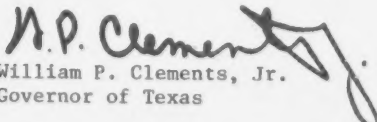
Attached please find the supporting testimony of the Texas Department of Water Resources pertaining to certain public works projects administered by the United States Corps of Engineers in the Red River Basin of Texas.

The Texas Department of Water Resources is primarily responsible for the proper development and conservation of our water resources in Texas, and in that regard, has carefully examined and analyzed each of these projects. I generally concur in its findings and recommendations and trust that this testimony will be carefully considered by your Committee.

I understand the Administration is supporting increased funding for water projects if a cost-sharing program is developed which places more responsibility on states. As you know, authorizing committees of Congress are now considering this. In Texas, we are interested in greater state responsibility and participation in the area of federal water project development and we are willing and anxious to work with Congress during its deliberations on this concept.

Thank you for your consideration.

Sincerely,


William P. Clements, Jr.
Governor of Texas

STATEMENT OF HARVEY DAVIS, EXECUTIVE DIRECTOR, TEXAS DEPARTMENT OF
WATER RESOURCES

The Texas Department of Water Resources respectfully submits the following testimony regarding Corps of Engineers public works projects located in the Red and Sulphur River Basins and Cypress Creek Basin in the State of Texas.

Responsibility for Statewide planning and development of water resources rests with the Texas Department of Water Resources. The Department has been statutorily designated as the State agency to cooperate with appropriate agencies of the Federal government and with other State and local governmental entities in matters relating to water resources development. In order to assure orderly development and management of the State's water resources, the Department has formulated and adopted a comprehensive Statewide plan known as the "Texas Water Plan", which under Texas statutes serves as the official guide for future water development in Texas.

The plan indicates the need for specific projects, including alternatives, to meet the State's water needs and to provide for State, regional, and National economic growth and stability. The Department of Water Resources maintains a continuing planning program in order to keep the plan current to address changing economic, social, hydrologic, and environmental conditions in the State. The projects which we offer testimony on to this Subcommittee are all integral elements of the State's water plan.

ARKANSAS-RED CHLORIDE CONTROL PROJECT

The Arkansas-Red River Basins Chloride Control Project, which is directed toward the improvement and preservation of water quality in the states of Texas, Oklahoma, and Kansas, is imperative if full utilization of these surface-water supplies is to be realized. Presently, more than 1,000 miles of streams in each of the two river basins are severely contaminated by natural brines. Consequently, waters of the streams are not suitable for municipal and most industrial and agricultural purposes. Large volumes of salt enter the streams from 15 natural sources, 10 of which are located in Texas. There exists an immediate need for good quality water within and to the west of the areas of natural salt pollution, and a large potential need exists downstream from the areas in the eastern part of the Red River Basin.

Section 74 of the Water Resources Development Act of 1974 authorized initiation of construction of natural salt-control facilities within the Wichita River Basin, Texas, a tributary of the Red River and identified as Area VIII of the Arkansas-Red Chloride Control Project. These natural salt-contributing areas adversely affect the quality of water stored in Lake Kemp, a water supply and flood control reservoir located on the main stem of the Wichita River, to the point that the supply is unsuitable for many beneficial uses, including municipal water supply. The quality of water cannot be improved, and the supply cannot be fully utilized, unless construction of natural salt-control facilities is completed. The Corps has indicated a capability to expend \$5,100,000 to continue construction of natural salt control facilities at Area VIII during Fiscal Year 1983 and President Reagan has recommended that the same amount be appropriated for this project in Fiscal Year 1983.

The Department respectfully requests that the Committee assure continuation of construction of this urgently-needed project at the President's recommended level of \$5,100,000 for Fiscal Year 1983.

LAKE WICHITA, HOLIDAY CREEK

Lake Wichita was constructed on Holiday Creek by the City of Wichita Falls, Texas in 1901. The dam and spillway, which provides partial flood protection for highly developed urban areas of the City of Wichita Falls, has deteriorated badly and the spillway capacity is inadequate to handle floods which occur in the Holiday Creek watershed. Further, the dam has been assigned a high hazard classification by the Corps under the National Dam Safety Program and has been declared unsafe by both the Corps and the State of Texas. In response to Congressional resolution and studies authorized by the Chief of Engineers, the Corps has completed studies and has recommended a plan to meet the flood control needs of the area which includes replacement of the existing Lake Wichita Dam and enlargement of the channel

downstream of the dam. The City of Wichita Falls strongly supports the project and will assume all non-federal responsibilities.

The Corps of Engineers has indicated a capability to expend \$250,000 in Fiscal Year 1983 to continue advanced planning and engineering design of the project. The President's budget recommends only \$190,000 be provided for this work during Fiscal Year 1983. The Department strongly urges appropriation of the full extent of the Corps capability for Fiscal Year 1983.

RED RIVER WATERWAY, LOUISIANA, ARKANSAS, OKLAHOMA, TEXAS (INDEX, ARKANSAS TO DENISON DAM, TEXAS)

The Southwestern Division, Corps of Engineers, which has jurisdiction over this project within the reach from the vicinity of Index, Arkansas to Denison Dam, Texas and Oklahoma, has expressed a capability of \$350,000 to continue planning of the project in this reach during Fiscal Year 1983. The President's budget recommends no funding in Fiscal Year 1983. The Department wishes to advise the Subcommittee that there is substantial interest by the State of Texas in bank stabilization and channel realignment of the Red River in the reach below Denison Dam. Legislation was recently enacted by the Texas Legislature to specifically provide an appropriate regional governmental entity capable of providing the Corps of Engineers with the necessary items of local cooperation for this project. The Department therefore urges the Committee to provide the Corps with sufficient funds to resume advance planning and engineering design of bank protection and stabilization measures for this reach during Fiscal Year 1983.

COOPER LAKE AND CHANNELS, TEXAS

The Cooper Lake and Channels Project, located in the Sulphur River Basin upstream of Lake Wright Patman in the State of Texas, was authorized by Public Law 218 of the 84th Congress. In addition to providing 273,000 acre-feet of water conservation storage space, the reservoir will allow sufficient storage for basin-wide flood protection to convert 120,000 acre-feet of flood control space in Lake Wright Patman into water supply storage for the Texarkana water demand area.

The Department of Water Resources appreciates the consideration this Subcommittee has allowed the project in the past. The project has been subjected to lengthy delays, due in large part in recent years to litigation under the National Environmental Policy Act and subsequent alleged inadequacies in the Environmental Impact Statement. The Corps of Engineers completed a Supplemental Environmental Impact Statement in October, 1980 and a final Supplemental EIS was filed with the Environmental Protection Agency on March 27, 1981. In summary, the recommended plan incorporates all means to avoid, minimize, or compensate for environmental harm. Completion of Cooper Lake is essential to meet existing and future water needs of the Sulphur River Municipal Water District, City of Irving, Texas, and the North Texas Municipal Water District. The North Texas Municipal Water District includes eleven member cities in the rapidly-expanding urban area of more than 530,000 residents in a 1,600 square-mile area to the north and east of Dallas, and also serves 44 other entities, including 17 customer cities, rural water supply corporations, and municipal utility districts in the region. The District faces serious, short-term water supply problems unless construction of Cooper Lake is reinitiated, since its total water supply is currently provided by one reservoir - Lake Lavon. This is considered one of the most critical water supply problems in Texas.

The benefits to be gained from construction of the Cooper Lake and Channels Project substantially exceed the adverse effects. The Corps of Engineers has indicated the capability to expend \$1,500,000 in Fiscal Year 1983 to continue construction of Cooper Lake. The President's budget also recommends \$1,500,000 be appropriated for this project. This project is one of the most urgently-needed water resource projects in Texas. The Department strongly urges the Committee to appropriate the full amount of the Corps capability.

LITTLE CYPRESS CREEK

A study of the feasibility of improvements for flood control, water-conservation, and other water-related purposes in the Cypress Creek Basin was undertaken by the Corps of Engineers in October, 1979 pursuant to a resolution adopted May 9, 1979 by the Committee on Public Works and Transportation, U.S. House of Representatives. This area of northeast Texas is undergoing unprecedented growth due largely to accelerated development and utilization of vast lignite resources. The occurrence of economically recoverable lignite reserves in the region has delayed construction of at least one major Corps of Engineers reservoir project in the area, thus seriously affecting the availability of firm water supplies for this region.

The current feasibility study is expected to require four years for completion. The Corps of Engineers has expressed the capability to expend \$515,000 during Fiscal Year 1983, which would advance the study completion date by twelve months. The President's budget recommends only \$240,000 be appropriated for this study in Fiscal Year 1983. The Department respectfully requests that the Committee appropriate the full amount of the Corps capability for Fiscal Year 1983.

MCKINNEY BAYOU, ARKANSAS AND TEXAS

Serious flooding and drainage problems within the McKinney Bayou watershed, and particularly in the Days Creek and Nix Creek drainage systems within the corporate limits of Texarkana, Texas and Texarkana, Arkansas, have been studied by the Corps of Engineers under authority granted by the Water Resources Development Act of 1976. A preliminary plan of improvements has been prepared by the Corps of Engineers, and the local governmental entities have indicated their willingness and ability to assume the necessary items of local cooperation as required by the Corps.

The Corps of Engineers has indicated the capability to and expend \$240,000 in Fiscal Year 1983 to continue advanced planning and engineering design of the project. The President's budget also recommends that \$240,000 be appropriated. The Department respectfully requests that the Committee fund the full extent of the Corps capability for Fiscal Year 1983.

RECREATION FACILITIES AND OPERATION AND MAINTENANCE OF EXISTING PROJECTS

The Department respectfully requests appropriations to the Corps of Engineers for operation and maintenance of the following projects during Fiscal Year 1983: Arkansas-Red Chloride Control Data Stations (\$88,000); Arkansas-Red River Basin Chloride Control, Area VIII (\$64,000); Denison Dam, Lake Texoma (\$4,717,000); Ferrells Bridge Dam-Lake O' the Pines (\$2,814,000); Lake Kemp (\$162,000); Pat Mayse Lake (\$345,000); and Wright Patman Lake (\$1,461,000).

CONCLUDING COMMENTS

The Texas Department of Water Resources requests your support for and consideration of these regional water resource development needs. The Department most respectfully urges the allowance of funds as requested in order to accomplish the coordinated, orderly development of vitally-needed water resource project in the Red and Sulphur River Basins and the Cypress Creek Basin in the State of Texas.

RESOLUTION OF THE RED RIVER AUTHORITY OF TEXAS

WHEREAS, under authority of P.L. 90-483, approved 13 August 1968, in accordance with the report of the Chief of Engineers, dated 11 May 1967, contained in House Document No. 304, 90th Congress, 2nd Session, the Corps of Engineers, United States Army, has initiated pre-construction planning studies with a view to reevaluating the feasibility and economic justification of bank and channel stabilization on the Red River from Denison Dam (Lake Texoma) to the head of levees near Index, Arkansas.

WHEREAS, under the provisions of Section 221 of the Flood Control Act of 1970 (Public Law 91-611, 42 USC 1962d-5b) as amended by Section 4 of the River Basin Monetary Act of 1971 (P.L. 92-222) non-Federal interests will sign, prior to initiation of construction, a legally binding agreement with the Secretary of the Army to provide the required non-Federal cooperation for the project; and

WHEREAS, P.L. 90-483 requires non-Federal interests to furnish all lands, easements, and rights-of-way required for construction and maintenance, including alterations and relocations; to hold and save the United States free from damages; to maintain and operate the completed project in accordance with regulations prescribed by the Secretary of the Army; and possibly to make a cash contribution for a portion of the project costs; and

WHEREAS, The Corps of Engineers has requested assurances of non-Federal cooperation; and

WHEREAS, it is understood that such assurances do not commit the Federal Government to construction of the proposed improvements;

NOW, THEREFORE, BE IT RESOLVED by the Red River Authority of Texas:

1. That the Corps of Engineers is hereby advised that the Red River Authority of Texas desires the said authorized Red River Below Denison Dam, Louisiana, Arkansas, Oklahoma and Texas, Bank Stabilization, Denison Dam (Lake Texoma) to Head of Levees near Index, Arkansas Project to be constructed, provided that:

- a. The pre-construction planning studies by the Corps of Engineers find the project technically and financially feasible and economically justified;
- b. The State of Texas agrees with these Corps of Engineers finding;
- c. The State of Texas agrees in the recreation facilities proposed to be developed in Texas as an adjunct to the said Red River Bank Stabilization Project; and
- d. The States of Oklahoma and Arkansas and the local public affected by the Project will participate in and support the Project.

2. That the Red River Authority of Texas, hereby gives assurance to the United States that before initiation of project construction the Red River Authority of Texas will sign an agreement with the Corps of Engineers in accordance with Section 221 of the Flood Control Act of 1970, as amended, to fulfill the following requirements of non-Federal cooperation:

- a. Provide without cost to the United States all lands, easements, and rights-of-way in the State of Texas necessary for construction, operation, and maintenance of the project, including suitable areas determined by the Corps of Engineers to be required in the general public interest for disposal of dredging and excavation spoil, and provide necessary retaining dikes, bulkheads, and embankments therefore, or the cost of such retaining works, and also including all additional lands, or rights in lands required to insure public control of project-related recreational development in Texas;
- b. Hold and save the United States free from damages due to the construction, operation, and maintenance of the project;
- c. Maintain project works in Texas, after completion and transfer of the project works to the Red River Authority of Texas, in accordance with regulations prescribed by the Secretary of the Army;

d. Provide without cost to the United States all relocations of utilities, bridges, (except railroad), sewers, pipelines, and any other alterations of existing improvement in the State of Texas, required for construction, operation, and maintenance of the project;

e. Where the appraised value of the land provided for recreational development under 2.a. above amounts to less than 50 percent of the total first cost of the recreational development, make additional contributions sufficient to bring the non-Federal share to at least the said 50-percent level; which additional contribution may consist of the actual cost of carrying out an agreed-upon portion of the development, or a cash contribution, or a combination of both.

f. Operate and maintain for the life of the Federal project the developed recreational areas and facilities installed in Texas, pursuant to the agreement, except that facilities which are integral parts of a structure operated and maintained by the Federal Government shall be operated and maintained under whatever cost-sharing arrangement applies to the operation and maintenance of the basic structure;

g. Assure access to recreational developments in Texas to all persons on equal terms; and

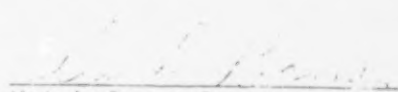
h. Provide the State of Texas' proportionate share of the total required cash contribution for land enhancement, such total cash contribution being presently estimated at 25.1 percent of the Federal cost of construction, the exact amount to be determined when the actual costs are known; or construct such additional items of work in the project as may be agreed upon by the Federal Government and the Red River Authority of Texas.

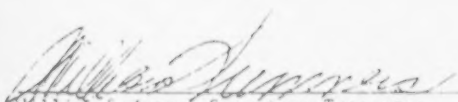
3. That it is the understanding of the Red River Authority of Texas that during pre-construction planning studies the Board of Engineers for Rivers and Harbors will review the report of the Chief of Engineers on Red River

Below Denison Dam, Louisiana, Arkansas, Oklahoma, and Texas, published as House Document Number 304, Ninetieth Congress with a view to determining whether any modifications of the recommendations contained therein are advisable with particular reference to the cash contribution required to be made by local interests for bank stabilization work on the Red River between Index, Arkansas, and Denison Dam, in accordance with the Senate Committee on Public Works resolution dated April 17, 1969.

ADOPTED THIS 16 DAY OF July 19 69

RED RIVER AUTHORITY OF TEXAS


Alvin L. Barnes, President


William Summers, Secretary-Treasurer

RED RIVER BASIN—ARKANSAS PROJECTS

STATEMENT OF JOHN STROUD, MEMBER OF RED RIVER COMMISSION FROM ARKANSAS

Mr. WELLS. Mr. Chairman, speaking for the State of Arkansas we have John Stroud, an attorney for the Red River Commission of Arkansas.

Mr. STROUD. Mr. Chairman, I am tempted to simply say I associate myself with the remarks of Senator Johnston and stop. We appreciate your concern on the progress of the Red River into Arkansas. We fully support, and have so stated in our written testimony, the Red River navigational project in Louisiana and the Arkansas-Red River chloride control projects upstream from us in Oklahoma and Texas. There are three projects, though, I would like just briefly to mention, two construction and one a planning project.

RED RIVER LEVEE AND BANK STABILIZATION BELOW DENISON DAM

There have been references to these two construction projects: the emergency bank protection program, where there is a Corps capability of \$6.8 million; and the Red River below Denison Dam program, a capability of \$1.6 million.

I certainly cannot in good conscience say fully fund our programs and have someone else take the cuts. I simply say to you that those programs need to continue. They are not in the President's budget. The 15 years that we have presented testimony here, there has always been a

program. The bank caving and erosion cannot be controlled other than under these two programs until we have the comprehensive program, which brings me to the third program. It is a planning program.

RED RIVER WATERWAY, SHREVEPORT, LA., TO INDEX, ARK.

You gentlemen 7 years ago saw fit to fund the preconstruction planning of the Red River Waterway, Shreveport, La., to Index, Ark. The Red River began that year in raising funds without a tax base, but raising money for the non-Federal cost. We have a good start on those funds with \$3 million in hand from cities, counties, levee districts, and the State legislature. If this program is not funded, I can now hear the comments of: "Congress has abandoned the program; refund the money," and, "We would never get it back."

The level of funding I think is not nearly as important as the planning to continue to the day that we can switch to construction and seek a feasibility study for navigation and keep this matter coming right upstream. But we urge you to put some money, a \$459,000 capability, and if it is \$100,000, something to continue the planning. Otherwise, 6 years of plans are down the drain, and I don't believe we could do our part of the non-Federal cost if we have a gap. We appreciate the opportunity to speak to you and know you will do the best you can.

Senator COCHRAN. Thank you, Mr. Stroud.

[The statement follows:]

STATEMENT OF JOHN F. STROUD, JR., REPRESENTING THE RED RIVER
COMMISSION OF ARKANSAS

GENERAL STATEMENT

On behalf of the Red River Commission of Arkansas, as its attorney, I wish to thank the members of this committee for the opportunity to express our concerns, needs and priorities of funding from the Congress to continue the orderly development of the Red River Valley in Southwest Arkansas.

We began submitting testimony 15 years ago in behalf of the Association of Levee Boards on Red River in Arkansas to seek support from the Congress for bank stabilization projects. The Red River Commission assumed this responsibility when the General Assembly of the State of Arkansas recognized the seriousness of the problem in 1973 and created the Commission.

The Red River Commission is vested with the responsibility of coordinating with the Congress and Corps of Engineers by furnishing the local cooperation and funding necessary to accomplish the water projects in the valley. Southwest Arkansas is fortunate to have an abundance of water, rich soil, and timber resources, but we vitally need the assistance of Congress to continue the bank stabilization projects for the preservation of those natural resources.

RED RIVER WATERWAY PROJECT, SHREVEPORT,
LOUISIANA, TO INDEX, ARKANSAS

The Red River Commission sought initial funding of pre-construction planning of this project for several years before the Congress selected it from many proposed projects to initiate funding for FY 77. This is the most important project to the State of Arkansas, and the main reason for the creation of the Red River Commission. The moneys spent during the past several years for pre-construction planning will have been wasted unless the planning is allowed to continue in an orderly fashion. Substantial sums of money have been appropriated by the Arkansas General Assembly and by towns and counties in Southwest Arkansas which are presently held in a trust fund to provide the non-federal funding required when construction begins. This project is the only solution to the tremendous bank caving problem that exists on the Red River as it meanders through the State of Arkansas. This project is also important to the State of Louisiana, for without the continuation of the planning and subsequent initiation of construction of this project, the maximum benefits cannot be obtained due to the adverse affect continued silting in Arkansas will have on the navigable channel below Shreveport.

RED RIVER LEVEES AND BANK STABILIZATION BELOW DENISON DAM
(TEXAS, ARKANSAS AND LOUISIANA); AND RED RIVER EMERGENCY
BANK PROTECTION (LOUISIANA, OKLAHOMA, ARKANSAS AND TEXAS)

During the past two decades, the Congress has funded the construction of Millwood, Dierks, Gillham and DeQueen Dams in Southwest Arkansas on tributaries of the Red River. These dams have virtually eliminated the danger from flooding which was so prevalent in our area earlier this century. However, with the solution of that problem, a new problem arose. Although bank caving has always been a way of life on the Red River, with the completion of the upstream dams which now hold the river at one-half to two-thirds bank full most of the time, the bank caving has been tremendously accelerated.

At best, it may be several years before construction can commence on the comprehensive bank stabilization program between Shreveport and Index. In the meantime, the only solution to the bank caving problem is continued funding of these two projects to stabilize the bank where public facilities, such as highways, pipelines and bridges, are in danger of being lost to the river, and in those areas where it is clearly less expensive to stabilize the bank than to repeatedly set back the existing levees. Bank caving in Southwest Arkansas is so severe that in some instances the levees have been rebuilt and

set back three and four times due to oppressive caving on the high bank side of the river. We fully support both of these projects which afford much needed relief, not only to the State of Arkansas but also to the States of Oklahoma, Louisiana and Texas. We, therefore, urge your thoughtful consideration of funding of these projects at least to a substantial portion of the capabilities of the Corps of Engineers for the next fiscal year.

RED RIVER BANK STABILIZATION, INDEX, ARKANSAS, TO DENISON DAM
(ARKANSAS, OKLAHOMA AND TEXAS)

Bank caving is not confined to the Red River Below Index, but occurs with striking similarity upstream from Index to Denison Dam. As there is no levee system above Index, the only bank stabilization work that has been accomplished upstream has been under the Emergency Bank Protection Program, and very little stabilization has occurred. The Corps of Engineers estimates that approximately 1,000 acres of valuable farm land are lost in this reach of the river each year, only to be washed ashore downstream as non-productive sand bars. We are pleased to join with the States of Texas and Oklahoma to seek continued funding of pre-construction planning of this comprehensive bank stabilization program and are pleased to report that all three states have provided the Corps of Engineers with the required assurances of the non-federal costs. The Congress saw fit to initiate this program two years ago and, although it was not funded for this fiscal year, it would be highly counter-productive to now terminate the pre-construction planning.

McKINNEY BAYOU

In 1976, the Congress authorized this project to provide a new outlet for surface drainage of the existing McKinney Bayou ditch to the Red River at Buzzards Bluff, to deepen and widen the existing channel and to construct additional laterals. The project is needed inasmuch as the original drainage ditch is completely inadequate to handle the surface run-off of water following heavy rain due to the thousands of acres of land that have been cleared since the ditch was initially planned and constructed. As this is a joint project of the States of Texas and Arkansas, we join with the State of Texas in seeking continued funding for pre-construction planning and for initiation of construction for FY 83.

ARKANSAS-RED RIVER BASIN CHLORIDE CONTROL (TEXAS AREA VIII)

Although the Red River was appropriately named due to its dark, murky color, with the completion of the several Corps of Engineers projects the stream will someday be clear and blue. The saline content of Red River is so high that the water cannot dependably be relied upon for irrigation of crops due to the resultant damage to crops and to the land itself. In our part of the country, water is rapidly becoming recognized as one of the most valuable resources of this nation, and certainly the Congress should also recognize the necessity of purification of this major stream for future municipal, industrial and agricultural use. We, therefore, join with the States of Oklahoma and Texas, where the salt removal works are actually to be constructed, in requesting \$5,100,000 for FY 83 to complete construction of this project.

RED RIVER WATERWAY, MISSISSIPPI RIVER TO SHREVEPORT, LOUISIANA

Although this project is not near the State of Arkansas, we are aware that the Red River Valley cannot reach its potential of economic, industrial or agricultural growth without the construction of this navigable channel. We recognize that the desire of the present administration and of the Congress to balance the budget of this country is a worthy objective and we support that objective. Without question, to achieve a balanced budget expenditures must be reduced and we are willing to take our proportionate reduction in funding for the overall good of the nation. However, we think it would be a tragic mistake to fund only at a level to allow completion of Lock and Dam No. 1 and not proceed with initiation of construction of Lock and Dam No. 2. Substantial

reduction from the full Corps capability can be accomplished without termination of this vital project. We, therefore, are pleased to join with the request of the State of Louisiana for funding at an appropriate level of the Red River Waterway, Mississippi River to Shreveport, Louisiana, and specifically at a level to initiate construction of Lock and Dam No. 2.

1. Red River Waterway, Shreveport, Louisiana, to Index, Arkansas - for continuation of pre-construction planning; President's budget request for FY 83 - none;
our request 495,000
2. Red River Levees and Bank Stabilization Below Denison Dam (Texas, Arkansas and Louisiana); President's budget request for FY 83 - none
our request 1,600,000
3. Red River Emergency Bank Protection (Louisiana, Oklahoma Arkansas and Texas); President's budget request for FY 83 - none
our request 6,800,000
4. Red River Bank Stabilization, Index, Arkansas, to Denison Dam (Arkansas, Oklahoma and Texas) for reinitiation of pre-construction planning; President's budget request for FY 83 - none
our request 350,000
5. McKinney Bayou; requested appropriation for continuation of pre-construction planning and for construction; President's budget request for FY 83 - \$240,000;
our request 240,000
6. Arkansas-Red River Basin Chloride Control - for continuation of construction (Texas Area VIII); President's budget request for FY 83 - \$5,100,000
our request 5,100,000
7. Red River Waterway, Mississippi River to Shreveport, Louisiana - to continue construction; President's budget request for FY 83 - \$30,000,000
our request 90,000,000

PREPARED STATEMENTS

Mr. WELLS. Mr. Chairman, our spokesman and vice president of the Red River Valley Association from Oklahoma was called back to Oklahoma this morning. He has submitted his statement. We would like you to include it and that it be made a part of the record.

Senator COCHRAN. That will be done.

[The statements follow:]

STATEMENT OF ED EDINGER, VICE PRESIDENT FOR THE STATE OF OKLAHOMA, RED RIVER VALLEY ASSOCIATION

IT IS ONCE AGAIN MY PLEASURE TO APPEAR BEFORE THIS COMMITTEE IN SUPPORT OF THE RED RIVER VALLEY BASIN. AS THE REPRESENTATIVE FOR THE STATE OF OKLAHOMA TO THE RED RIVER VALLEY ASSOCIATION I URGE YOU TO CONTINUE THE FUNDING OF ALL RED RIVER VALLEY PROJECTS. WE REALIZE A CUTBACK MUST BE MADE OF ALL FEDERAL PROJECTS, BUT ALSO FEEL THAT THESE VERY NEEDED PROJECTS BE CONTINUED ON A REDUCED SCALE. THRU-OUT THE YEARS YOU HAVE SUPPORTED AND APPROVED OUR PROJECTS AND WE CERTAINLY DO APPRECIATE YOUR COOPERATION. OVER THE YEARS MANY MILLIONS OF DOLLARS HAVE BEEN SPENT IN THE CONSTRUCTION OF DAMS TO CONTROL THE RED RIVER. THESE DAMS HAVE NOT ONLY SAVED MILLIONS OF DOLLARS IN PROPERTY DAMAGE AND LOSS OF VALUABLE FARM LAND, BUT THEY HAVE PROVIDED WATER SUPPLY FOR MUNICIPAL AND INDUSTRIAL USAGE ALSO PROVIDING RECREATION FACILITIES THAT HAVE BECOME A MAJOR TOURIST ATTRACTION THEREBY BRINGING A NEEDED INDUSTRY INTO AN AREA OF THE COUNTRY THAT REALLY NEEDS ASSISTANCE.

WITH THE COMPLETION OF THE MAJORITY OF THE DAMS, RED RIVER IS NOW UNDER CONTROL, HOWEVER, THERE IS MUCH MORE WORK TO BE ACCOMPLISHED. WE THEREFORE, KINDLY ASK FOR YOUR FULL CONSIDERATION OF THE CONTINUED FUNDING OF THE CHLORIDE CONTROL PROJECTS BOTH ON THE RED AND ARKANSAS RIVERS. THIS IS A VERY MUCH NEEDED PROJECT, WITH THE ENTIRE COUNTRY FACING A VERY SERIOUS WATER SHORTAGE IN THE NEXT DECADE, IS MOST IMPERATIVE THAT WE MOVE AHEAD WITH THE CHLORIDE CONTROL PROJECTS, IN ORDER TO INSURE THE RED RIVER VALLEY AND ALSO THE HIGH PLAINS AREA WITH A SOURCE OF USABLE WATER. WITH THE ELIMINATION OF THESE POLLUTANTS FROM THE ARKANSAS AND THE RED RIVER, IT WILL MEAN THE EXTENSION OF TIME WHEN WE ALL WILL BE SEARCHING FOR "THE MOST VALUABLE NATURAL RESOURCE," "WATER," FOR MUNICIPAL, INDUSTRIAL, AND IRRIGATION USES. SEVERAL YEARS AGO THE FEDERAL GOVERNMENT ENTERED INTO AN AGREEMENT WITH THE RESPECTIVE STATES TO ELIMINATE THE CHLORIDE POLLUTANTS FROM THE RED AND ARKANSAS RIVERS. THE STATES WOULD BE REQUIRED TO CONTROL THE MAN-MADE POLLUTION AND THE FEDERAL GOVERNMENT WOULD TAKE CARE OF THE NATURAL POLLUTANTS. TO DATE THE STATES OF TEXAS AND OKLAHOMA HAVE SPENT IN EXCESS OF \$45 MILLION DOLLARS IN THE RED RIVER BASIN. WE FEEL THAT WE HAVE DEMONSTRATED OUR WILLINGNESS TO HELP IN THIS ALL IMPORTANT MISSION AND WE FEEL THAT THE FEDERAL GOVERNMENT SHOULD MOVE FORWARD WITH THEIR PART OF CONSTRUCTING THE BRINE DAMS TO ELIMINATE THE SALTS FROM THE RIVERS.

ANOTHER MAJOR PROJECT THAT IS NEEDED, NOW THAT THE MONIES HAVE BEEN SPENT TO HARNESS THE RIVER IS THAT OF BANK STABILIZATION, TO INSURE AGAINST ANY MORE LOSS OF VALUABLE FARM LANDS. THE STATES INVOLVED HAVE ACCEPTED THE COST SHARE RATION AND NOW ASK THAT THIS MUCH NEEDED PROJECT PROCEED AS RAPIDLY AS POSSIBLE. THE AREA INVOLVED IS FROM INDEX, ARKANSAS TO THE DENNISON DAM. EACH YEAR WE LOSE THOUSANDS OF ACRES OF PRIME FARMLAND TO THE RIVER. WITH THIS PROJECT MOVING FORWARD WE FEEL THAT IN FUTURE YEARS NAVIGATION WILL BECOME A VERY FEASIBLE PROJECT.

THE LAST PROJECT AND BY NO MEANS THE LEAST IMPORTANT IS THE CONTINUATION OF THE CONSTRUCTION OF THE LOCKS AND DAMS NEEDED TO BRING NAVIGATION INTO THE SHREVEPORT AREA AND THE LONG RANGE NAVIGATION SYSTEM TO THE DENNISON DAM. WE FEEL THAT BY THE TIME THE NAVIGATION IS COMPLETED TO SHREVEPORT THE ENTIRE RED RIVER VALLEY WILL HAVE THE GROWTH AND THEN NAVIGATION WILL BE FEASIBLE TO DENNISON DAM AND THE LAST MAJOR RIVER IN THESE UNITED STATES WILL BECOME A NAVIGABLE RIVER.

YOUR FAVORABLE REACTION TO THE CORPS OF ENGINEERS PROJECTS FOR FULL DEVELOPMENT OF THE RED RIVER VALLEY WILL CERTAINLY BE APPRECIATED. THANK YOU.

STATEMENT OF JAMES R. BARNETT, EXECUTIVE DIRECTOR, OKLAHOMA WATER
RESOURCES BOARD

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE, IT HAS BEEN SOME SIX YEARS SINCE THE OKLAHOMA WATER RESOURCES BOARD SUBMITTED A STATEMENT TO A CONGRESSIONAL COMMITTEE. IN 1976, WE ENCOURAGED FUNDING FOR THE BUREAU OF RECLAMATION'S MCGEE CREEK RESERVOIR PROJECT, PROVIDING FLOOD CONTROL, WATER SUPPLY, RECREATION AND OTHER BENEFITS TO SOUTHEASTERN AND CENTRAL OKLAHOMA. BY THE WAY, THE MCGEE CREEK PROJECT IS NOW WELL UNDERWAY WITH COMPLETION ESTIMATED IN 1985 AND WE SINCERELY APPRECIATE YOUR PAST AND CONTINUED SUPPORT OF THE PROJECT. OUR ABSENCE FROM WASHINGTON SHOULD NOT BE CONSIDERED APATHY, BUT RATHER ONE OF CONTENTMENT AS OKLAHOMA'S CONGRESSIONAL DELEGATION HAS BEEN HIGHLY SUCCESSFUL IN SECURING FUNDING FOR WORTHWHILE WATER RESOURCE PLANNING AND CONSTRUCTION PROJECTS IN OUR STATE. HOWEVER, AS I ADDRESS YOU TODAY, THE CLIMATE FOR WATER DEVELOPMENT APPEARS TO BE CHANGING RADICALLY. THEREFORE, I BELIEVE THE SITUATION WARRANTS MY REMARKS ON SEVERAL WATER PROJECTS AFFECTING OKLAHOMA AND MY VIEWS ON FEDERAL/STATE COST-SHARING WHICH WILL NO DOUBT AFFECT US ALL.

MY FIRST COMMENTS CONCERN THE NAVIGATION AND CHLORIDE CONTROL PROJECTS ON THE RED RIVER, WHICH ARE OF INTEREST NOT ONLY TO OKLAHOMA, BUT TO THE STATES OF TEXAS, ARKANSAS AND LOUISIANA AS WELL. IT IS MY UNDERSTANDING THAT CONSTRUCTION FUNDS TO THE CORPS OF ENGINEERS FOR THE NAVIGATION SYSTEM FROM THE MOUTH OF THE RED RIVER UP TO SHREVEPORT HAVE BEEN SUBSTANTIALLY REDUCED IN THE PRESIDENT'S RECOMMENDED BUDGET. AS MY FRIENDS FROM THE RED RIVER VALLEY ASSOCIATION HAVE POINTED OUT, ANY DELAYS IN CONSTRUCTION OF THE SYSTEM WILL ENDANGER ITS EVENTUAL COMPLETION AND OPERATION. THEREFORE, I ENCOURAGE YOU TO SEEK THE FULL FUNDING LEVELS NECESSARY TO COMPLETE THE NAVIGATION CHANNEL WITHIN THE ORIGINAL TIME FRAME AND UNDER THE INITIAL FINANCING ARRANGEMENTS, THAT IS FULL FEDERAL FUNDING. FURTHERMORE, SHOULD THE CORPS' FEASIBILITY STUDIES PROVE FAVORABLE, WE WILL NO DOUBT BE BACK BEFORE YOU AGAIN SUPPORTING FUNDS FOR EXTENDING THE SYSTEM UP TO DENISON DAM.

THE OTHER RED RIVER BASIN PROJECT, THE CORPS OF ENGINEERS' CHLORIDE CONTROL PROJECT, HAS BEEN PARTIALLY FUNDED FOR CONSTRUCTION AT AREA VIII NEAR TRUSCOTT, TEXAS. CLEAN UP OF THE REMAINING SOURCE AREAS ON THE RED RIVER HAVE BEEN DETERMINED TO BE ECONOMICALLY FEASIBLE AND THE CORPS ONLY AWAITS CONSTRUCTION FUNDS. THE BROAD-BASED BENEFITS FROM THIS PROJECT IN TERMS OF WATER QUALITY, FLOOD CONTROL, WATER SUPPLY, ETC. MAKES IT A HIGH STATE PRIORITY. AS YOU MAY RECALL, THE ORIGINAL PURPOSE FOR THE CHLORIDE CONTROL PROJECT WAS WATER QUALITY ENHANCEMENT DUE TO THE MAN-MADE AND NATURAL POLLUTION DEGRADING THE STREAM.

WHILE SALT FLATS AND SPRINGS WITHIN THE AREA CONTRIBUTE A SIGNIFICANT AMOUNT OF CHLORIDES, RECENT ESCALATION OF OIL AND GAS DEVELOPMENT IS ALSO RESPONSIBLE FOR PART OF THE PROBLEM, PRIMARILY DUE TO THE NEED FOR DISPOSAL OF SALT WATER PRODUCED AS A BY-PRODUCT OF OIL AND GAS EXTRACTION. RECOGNIZING THE JOINT ROLE OF THE STATE AND FEDERAL GOVERNMENT IN SEEKING AN EFFECTIVE SOLUTION TO THE PROBLEM, OKLAHOMA HAS STEPPED UP HER EFFORTS IN CONTROLLING

IMPROPER SALT WATER DISPOSAL ACTIVITIES. UNDER THE JURISDICTION OF THE OKLAHOMA CORPORATION COMMISSION, INCREASED ENFORCEMENT OF DISPOSAL REGULATIONS HAS SIGNIFICANTLY REDUCED MAN-MADE CHLORIDE POLLUTION. IT HAS BEEN ESTIMATED THAT \$5 MILLION ANNUALLY IS SPENT TO CONTROL OIL FIELD BRINE DISPOSAL IN THE OKLAHOMA PART OF THE RED RIVER BASIN, REPRESENTING A SUBSTANTIAL CONTRIBUTION BY THE STATE TOWARDS THE CHLORIDE CONTROL PROJECT.

WITH THE STATE ALREADY TAKING THIS MAJOR STEP TO ADDRESS THE MAN-MADE SALT PROBLEM, IT WOULD APPEAR APPROPRIATE FOR THE FEDERAL GOVERNMENT TO FULFILL ITS COMMITMENT FOR CLEANING UP THE NATURAL CHLORIDE CONCENTRATIONS. I KNOW OF NO BETTER WAY TO DEMONSTRATE SUCH COMMITMENT THAN UNDERTAKING CONSTRUCTION AND EFFECTIVE OPERATION OF THE REMAINING SALT SOURCE AREAS.

ANOTHER AREA OF INTEREST TO THE WATER RESOURCES BOARD IS THE STATUS OF TWO POTENTIAL RESERVOIR SITES, ONE IN CENTRAL OKLAHOMA AND THE OTHER IN THE EAST CENTRAL PART OF THE STATE. THE SEWARD PROJECT SITE, ON COTTONWOOD CREEK NORTH OF OKLAHOMA CITY, HAS BEEN STUDIED BY THE BUREAU OF RECLAMATION FOR A NUMBER OF YEARS AS A MULTI-PURPOSE RESERVOIR PROVIDING FLOOD CONTROL, WATER SUPPLY, RECREATION AND OTHER USES IN A WATER-SHORT AREA. FULL FEASIBILITY GRADE STUDIES FOR THE RESERVOIR WERE NOT COMPLETED DUE TO LACK OF FUNDS AND THE INABILITY TO DEMONSTRATE WATER SUPPLY NEEDS. HOWEVER, OUR WORK AT THE STATE LEVEL HAS SHOWN A TREMENDOUS LOCAL INTEREST IN PURSUING THE RESERVOIR FROM SURROUNDING CITIES, TOWNS AND RURAL WATER DISTRICTS. BASED UPON STATE AND LOCAL SUPPORT, THE BUREAU'S AMARILLO REGIONAL OFFICE HAS AGREED TO COMPLETE THE ENGINEERING WORK NECESSARY FOR CONGRESSIONAL AUTHORIZATION IF FUNDING CAN BE SECURED. TO COMPLEMENT THE BUREAU'S EFFORT, THE OKLAHOMA WATER RESOURCES BOARD WILL PROVIDE SIGNIFICANT IN-KIND CONTRIBUTIONS BY DETERMINING SPECIFIC COMMUNITY NEEDS, PREPARING ADDITIONAL WATER QUALITY ANALYSES, PROMOTING LOCAL INVOLVEMENT AND, MOST IMPORTANTLY, SHARING A PORTION OF THE CONSTRUCTION COSTS. THEREFORE, MR. CHAIRMAN, I ENCOURAGE THE COMMITTEE TO REQUEST \$125,000 IN BOTH FY83 AND FY84 TO ALLOW THE BUREAU TO COMPLETE THE FULL STUDY.

THE OTHER POTENTIAL SITE OF CONCERN IS PARKER RESERVOIR ON MUDDY BOGGY CREEK IN COAL AND HUGHES COUNTIES OF EAST CENTRAL OKLAHOMA. THE SURVEY REPORT FOR THIS PROJECT WAS COMPLETED BY THE CORPS OF ENGINEERS IN 1976 AND IS CURRENTLY UP FOR CONGRESSIONAL AUTHORIZATION AND, IF APPROPRIATE, CONSTRUCTION FUNDING. AS CONGRESSMAN WATKINS WELL KNOWS, OUR AGENCY HAS RECEIVED WATER RIGHT APPLICATIONS FOR ALMOST TEN TIMES THE 42mgd WATER SUPPLY YIELD OF THE RESERVOIR, DEMONSTRATING A SIGNIFICANT NEED FOR THE WATER BOTH WITHIN AND OUTSIDE THE LOCAL AREA. THEREFORE, I APPLAUD CONGRESSMAN WATKINS' EFFORTS TO SEEK AUTHORIZATION IN FY83 NOT ONLY FOR THE RESERVOIR, BUT ALSO FOR THE ATTENDANT CONVEYANCE FACILITIES.

THE CENTRAL OKLAHOMA PROJECT (COP) IS ANOTHER PROJECT THAT HAS BEEN UNDER INVESTIGATION BY THE CORPS FOR MANY YEARS. INITIATED IN 1955, THE COP WOULD DELIVER MUNICIPAL AND INDUSTRIAL WATER TO THE OKLAHOMA CITY METROPOLITAN AREA BY DIVERTING WATER FROM RESERVOIRS LOCATED IN SOUTHEASTERN OKLAHOMA. ALTHOUGH STUDIES INDICATED THE PROJECT MET FEDERAL ECONOMIC FEASIBILITY CRITERIA, THE CORPS SUSPENDED WORK ON THE STUDY IN 1978 DUE TO THE FAILURE OF THE STATE OF

OKLAHOMA TO PROVIDE THE NECESSARY LEGAL AND FINANCIAL ASSURANCES FOR REPAYMENT OF COSTS OF THE WATER SUPPLY CONVEYANCE FACILITIES. HOWEVER, RECENT LEGISLATIVE RECOGNITION OF THE OKLAHOMA COMPREHENSIVE WATER PLAN AS THE STATE'S "GUIDE" TO FUTURE WATER RESOURCES PLANNING AND MANAGEMENT HAS GIVEN THE CORPS SUFFICIENT ASSURANCE TO RESUME WORK ON THE PROJECT. APPROXIMATELY \$150,000 IS CONTAINED IN THE CORPS FY83 BUDGET TO REINITIATE THE WATER SUPPLY COMPONENT OF THE COP. THEREFORE, I ENCOURAGE YOU TO RETAIN THIS FUNDING.

NOW I WOULD LIKE TO TURN TO A TOPIC WHICH HAS GENERATED A GREAT DEAL OF DISCUSSION AMONG MOST STATES AND ABSOLUTE FEAR AMONG SOME. THAT TOPIC, OF COURSE, IS FEDERAL/STATE COST-SHARING. OUR POSITION HAS TRADITIONALLY BEEN THAT WATER SUPPLY DEVELOPMENT IS IN THE FEDERAL INTEREST, NO MATTER WHAT THE DEFINITION, AND THAT AS LONG AS THE ULTIMATE USER PAYS BACK MONEY TO THE U.S. TREASURY UNDER A WATER SUPPLY STORAGE CONTRACT, FEDERAL TAX DOLLARS FOR CONSTRUCTION OF THE PROJECT WERE PUT TO GOOD USE. ADMITTEDLY, OKLAHOMA HAS BEEN VERY SUCCESSFUL IN GETTING PROJECTS VIA THE EXISTING MECHANISM AND WE WOULD PREFER A CONTINUATION OF THIS APPROACH. HOWEVER, IN FACING THE REALITIES OF A \$100 BILLION PLUS FEDERAL DEFICIT AND THE IMPACT CONTINUOUS DEFICITS HAVE HAD ON THE U.S. ECONOMY, WE UNDERSTAND THE NECESSITY TO EVALUATE ALTERNATIVE FINANCIAL ARRANGEMENTS.

THE PROPOSED COST-SHARING PERCENTAGES FLOATING AROUND AS OF LATE WOULD APPEAR TO PLACE AN INORDINATE FINANCIAL BURDEN ON MOST STATES. A SCENARIO CAN EASILY BE CONSTRUCTED IN WHICH THOSE STATES WITH THE CAPABILITY OF PLACING SIGNIFICANT AMOUNTS OF MONEY UP FRONT WOULD IN ESSENCE GRAB UP ALL THE FEDERAL PUBLIC WORKS APPROPRIATIONS. OR A SITUATION COULD ARISE WHERE STATES BID ONE AGAINST THE OTHER FOR THE FEDERAL BUCKS WITH THE RESULT BEING THOSE STATES WITHOUT ADEQUATE ANTE WOULD BE LEFT WITHOUT. WHILE IT WOULD CERTAINLY BE DIFFICULT POLITICALLY FOR THESE TYPES OF SCENARIOS TO MATERIALIZE, I BELIEVE THE DIRECTION IN WHICH THE REAGAN ADMINISTRATION IS HEADED LENDS ITSELF TO NOTHING SHORT OF A HAVE AND HAVE NOT SITUATION.

IN OKLAHOMA, OUR GOD-SENT RESOURCES OF OIL AND GAS HAVE PLACED OUR STATE IN SUCH A FAVORABLE FINANCIAL CONDITION THAT WE MIGHT ACTUALLY PROFIT FROM THE REAGAN PROPOSALS. IN FACT, AT THIS VERY TIME, THE OKLAHOMA LEGISLATURE IS CONSIDERING THE ESTABLISHMENT OF A WATER DEVELOPMENT FUND FROM REVENUES DEDICATED FROM OUR OIL AND GAS GROSS PRODUCTION TAX WHICH WOULD ALLOW THE STATE TO COST-SHARE ON FEDERALLY AUTHORIZED PROJECTS. APPROXIMATELY \$50 MILLION A YEAR WOULD ACCRUE TO THE FUND WITH A STATUTORY CEILING OF \$400 MILLION. THE FUND WOULD ALSO BE USED TO SECURE REVENUE BONDS ISSUED BY THE BOARD TO PROVIDE LOANS FOR LOCAL AND REGIONAL WATER DISTRIBUTION AND TREATMENT SYSTEMS. IF THE LEGISLATION PASSES, WE FEEL OKLAHOMA WOULD BE IN A POSITION TO CONTINUE OBTAINING FEDERAL WATER PROJECTS. HOWEVER, WE ALSO REALIZE THAT OUR PETROLEUM RESOURCES ARE OF A FINITE NATURE AND, AT SOME TIME IN THE FUTURE, WE WILL NOT BE REAPING THE PRESENT BENEFITS FROM OIL AND GAS ACTIVITIES.

IN LIEU OF FIXED STATE COST-SHARING PERCENTAGES, A MORE APPROPRIATE METHOD MAY BE A PROJECT-BY-PROJECT NEGOTIATION BETWEEN THE FEDERAL GOVERNMENT AND THE STATE AND/OR LOCAL SPONSOR. IN THIS WAY, THOSE STATES WITH

COST-SHARING CAPABILITY MAY BE ABLE TO EXPEDITE THE LENGTHY PLANNING TO CONSTRUCTION PROCESS, BUT YET NOT CROWD OUT LESS FORTUNATE STATES, WHO WOULD BE FACED WITH WORKING THROUGH REGULAR CONGRESSIONAL CHANNELS. IT SEEMS TO ME THIS APPROACH OFFERS SOME DISTINCT ADVANTAGES AND SHOULD BE GIVEN APPROPRIATE CONSIDERATION.

IN CLOSING, MR CHAIRMAN, I WOULD LIKE TO EXPRESS MY APPRECIATION TO THE COMMITTEE FOR THE OPPORTUNITY TO SUBMIT THIS STATEMENT AND I WISH YOU WELL AS YOU ENDEAVOR TO MAKE THE DECISIONS WHICH WILL PROVIDE EQUITABLE OPPORTUNITY FOR ALL STATES TO DEVELOP ONE OF OUR MOST PRECIOUS NATURAL RESOURCES - WATER. THANK YOU.

RESOLUTION OF THE SOUTHERN OKLAHOMA DEVELOPMENT ASSOCIATION

WHEREAS, the Board of Directors of the Southern Oklahoma Development Association (SODA) recognizes the importance of the Red River to the life and character of residents within Arkansas, Louisiana, Texas, and Oklahoma; and,

WHEREAS, the future development of the entire Red River Valley can be greatly enhanced by concerted action to realize the full economic development potential related to the Red River; and,

WHEREAS, the Red River Valley Association has provided leadership for concerted action to realize the potential of the Red River on the lives and future of citizens within this region; and,

WHEREAS, Congressman Wes Watkins has expressed his willingness to assist in the realization of the full economic development potential of the Red River with a view that is both far-sighted and visionary; and,

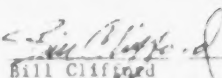
WHEREAS, the efforts of Congressman Watkins of the Red River Valley Association are complementary and mutually supportive; and,

WHEREAS, the Southern Oklahoma Development Association (SODA) recognizes the value and the importance of these complementary and mutually supportive efforts,

NOW, THEREFORE, BE IT RESOLVED THAT the Board of Directors of the Southern Oklahoma Development Association (SODA) do endorse current efforts to fully develop the Red River and do, herewith, lend our support to expanded and accelerated future efforts toward this end.

APPROVED AND ADOPTED THIS 18th day of February, 1982, by the Board of Directors of the Southern Oklahoma Development Association (SODA) meeting in regular session.


Troyce McGovern, President
Southern Oklahoma Development
Association


Bill Clifford
Secretary to the Board

RED RIVER WATERWAY, LA.

STATEMENT OF ROGERS PRESTRIDGE, MEMBER OF CADDO-BOSSIER PARISHES PORT COMMISSION

Mr. WELLS. Speaking on behalf of the Caddo-Bossier Port Commission, Mr. Nicky Prestridge.

Mr. PRESTRIDGE. Good morning, Mr. Chairman, members of the committee. I too appreciate the opportunity to appear before you today and tell you something about what the port commission of Caddo-Bossier Parish has done for preparation of navigation on the river.

We were created by the State legislature and in 1976 commissioned a study on feasible port sites. As a result of that study, we located a site and in 1980 we purchased 129 acres of land for that industrial site and port development. In 1981, we purchased an additional 260 acres.

SERVICE AREA AND TONNAGE PROJECTIONS

In 1976, when the first master plan was implemented, we determined the tributary area that our port facility would serve. It showed that we would be serving 110 miles to the north of us, 30 miles to the east of us, 70 miles to the south. But the amazing thing the master plan showed was that we would serve the Dallas-Fort Worth metroplex, an area of 4.5 million people. We would be the freshwater port for that area. I think that is very significant.

At the same time, we had certain figures on the use of the port. It indicated at that time that approximately 750,000 tons of general cargo would be shipped through the Shreveport terminal by 1990, assuming we would have navigation completed in 1985. Obviously, those facts are not realistic today. But in 1981, these figures were updated. I have submitted that in my statement to you.

It shows that today if we had a port facility by 1990, 1.8 million tons of general cargo would be going through that port. I think that this is an indication of why we need an update in our present cost-benefit ratio. I am delighted to hear Senator Johnston's assurance that that is forthcoming, because I think you are going to see that kind of a drastic increase in the benefits as compared to the cost in a new benefit-cost ratio.

I think also that someone should seriously consider the need for an increased amount as far as freshwater use is concerned, because particularly in the Shreveport city area we are looking at a water crisis in the very near future, in the next 10 to 15 years. I think this could go a long way in eliminating this crisis that we are about to face.

LOCAL INVESTMENT

Gentlemen, I thank you very much for your attention. I want you to know that up through today \$4,132,000 of state and local money has been invested in preparation for navigation on the Red River by the citizens of Caddo-Bossier and the State of Louisiana. We have done our part. The President said that he wanted local participation. We have given local participation. We ask for your continued support and thank you for your support in the past.

Senator COCHRAN. Thank you, Mr. Prestridge.

Senator STENNIS. Mr. Chairman, regretfully, I have to ask you to excuse me. I want to express my interest in the Red River Waterway project. I am familiar with it and have gone into it more than once. I am supporting it all the way down the line. I have a matter at the office that is urgent.

Senator COCHRAN. We appreciate so much your being here and thank you, Senator Stennis.

Mr. WELLS. Thank you, Senator Stennis.

[The statement follows:]

STATEMENT OF ROGERS M. PRESTRIDGE, CADDO-BOSSIER PORT COMMISSION

On behalf of the members of the Caddo-Bossier Parishes Port Commission, I would like to sincerely thank you for allowing me to address your committee hearings on the Red River Navigation Project.

The sentiments of our Port Commission echo identically the sentiments of the Red River Valley Association who so graciously allowed me to participate on this program today. These sentiments are that the total overall benefits which will accrue from the completion of the Red River Waterway project -- i.e., navigation, improved availability of potable water, the potential for hydroelectric generation, and improved recreational facilities -- are vital to the continued well-being of the citizens of northwest Louisiana, northeast Texas and southwest Arkansas. Consequently, I and the other members of our Commission fully and emphatically support the continued construction of the project and all its many aspects.

We are aware that our nation is facing urgent economic problems, and that funding for all programs must be expected to be reduced in order to improve the chances of balancing the federal budget. At the same time, I join the Red River Valley Association in urging you to treat the funding for the Red River project fairly by providing sufficient funds, even if reduced, to keep the project alive during these trying times. When the economic situation improves, we would hope for full funding for the U. S. Corps of Engineers to proceed with the completion of this project, which was authorized by the U. S. Congress some 15 years ago.

I have taken the liberty of including material which outlines the numerous benefits Red River navigation would bring to the citizens of the four-state area affected by this project. In addition, this material shows the contributions that have been made by the State of Louisiana, the parishes of Caddo and Bossier and the cities of Shreveport and Bossier City in preparation for the return of navigation to this area. If you desire any further information, we will be pleased to provide it.

BRIEF HISTORY OF
CADDO-BOSSIER PARISHES PORT COMMISSION

ATTACHMENT 1.

The Caddo-Bossier Port Commission was formed in 1962 following Louisiana voters approval of a constitutional amendment. The Commission is composed of seven members: two each appointed by the Caddo and Bossier Parishes Police Juries, one each appointed by the cities of Shreveport and Bossier City, and one member selected by the Commission members on an at-large basis.

The Commission was relatively inactive until the mid-1970s, since although the 90th Congress had authorized the construction of the Red River Waterway Project by the U. S. Corps of Engineers in the Rivers and Harbors Act of 1968 no serious funding had been appropriated by Congress for the construction. Then, in mid-1970s the Corps began to receive funding for the Phase I (bank stabilization) aspect of the project.

With work finally underway on the Red River, the Commission contracted with Tippetts-Abbett-McCarthy-Stratton, consulting engineers in New York, to prepare a Feasibility Study of a public port facility to serve the region. The report, completed in April 1976, that the development of a public port facility and an accompanying industrial park would prove highly beneficial to the area when the Red River Navigation project was complete.

With the statistical information contained in the Feasibility Study, the Commission petitioned the Louisiana Legislature for \$4 million which would be utilized to purchase the land upon which a public port/industrial park complex could be built. The \$4 million was allocated by the 1979 Legislature. With these funds the Commission purchased 829 acres, located south of Shreveport, for some \$2,932,000 in June 1980. In August 1981 an additional 225 acres adjoining the original land purchase was acquired at a cost of \$815,000.

The Commission during 1981 also contracted with a joint venture of Griswold Engineering Company of Bossier City and Garver and Garver, consulting engineers of Little Rock, AR, for a Master Development Plan of the proposed public port and industrial park complex. Additionally, Griswold was contracted to prepare an

updated Port Users Survey of industries located in the 3-state area which would be served by a Caddo-Bossier facility. The Griswold Survey, while based on a smaller sampling group than that contacted in 1976 by TAMS, showed a substantial increase in potential tonnage which would go through a public facility should the waterway project be completed by 1990. The 1976 study projected 789,000 tons of general cargo could be anticipated to pass through a Caddo-Bossier public port by 1990; the 1981 Griswold report projected 1,890,350 tons.

The Commission is currently in the process of preparing an application for the establishment of a foreign trade zone. Additionally, we are attempting to obtain funds for the acquisition of additional land and initial engineering from the Louisiana Legislature.

SPECIFIC BENEFITS
ACCURING TO
NORTHWEST LOUISIANA, NORTHEAST TEXAS AND SOUTHWEST ARKANSAS
BY THE AVAILABILITY OF
PUBLIC PORT FACILITIES AND ACCOMPANING INDUSTRIAL PARK

ATTACHMENT 2.

(The following information was derived from information contained in a Feasibility Study prepared for the Caddo-Bossier Parishes Port Commission by Tippet-Abbott-McCarthy-Stratton in 1976 and from an updated Port Users Survey prepared by Griswold Engineering Co. in 1981.)

I. Potential Tributary Area

A. Boundary Limits

1. 60 miles to east of Shreveport-Bossier City (Ouachita River)
2. 110 miles to north (existing inland waterway on Arkansas-Verdigris River system)
3. 70 miles to south (proposed Alexandria, LA port)
4. 220 miles to west (Dallas-Ft. Worth area)

B. Demographics

1. Land Mass

- a) 39,000 miles
- b) 53 counties and parishes, including 36 counties in Texas, 9 parishes in Louisiana, 5 counties in Arkansas and 3 counties in Oklahoma.

2. Population -- 3.7 million in 1970

3. Total employment of area

- a) Approximately 326,000 in 1972
- b) 6,000 manufacturing establishments in tributary area in 1972; more than 1/3 have 20 or more employees
- c) Shipment of goods by these manufacturers were worth more than \$12.1 billion, including more than \$5.7 billion in value added.

II. Potential Tonnage through Public Port by 1990 (if Red River Waterway completed)

A. TAMS 1976 Feasibility Study

1. 789,000 tons of general cargo. (Total firms contacted: 1,859; responses from 358) (Public Terminal)
2. 1,567,500 tons (Private Terminals)

B. Griswold 1981 Port Users Survey

1. 1,890,350 tons of general cargo (Total firms contacted: 217; responses from 65) (Public Terminal)
2. 1,641,418 tons (Private Terminals)

III. Direct Economic Benefits to Area

A. Transportation Savings for Shippers or Consignees. (Availability of water transport would be expected to force a reduction of costs of other modes of transportation.)

B. New Income

1. Revenue generated by services and materials, including terminal operating charges, port and local freight charges, bunkering and miscellaneous vessel supplies.
2. Creation of a possible 4,000 new jobs by the time a 1,500 acre industrial park is fully occupied.

3. Total direct benefits of from \$4 million to a possible \$6.9 million in 1995.
4. Multiplier effect -- each new dollar would generate \$2.50 total new money, resulting in total annual direct and indirect monetary benefits of \$16 million by 1995.

IV. Importance of Port/Industrial Park to Area

- A. New jobs for growing work force.
- B. Direct and indirect new income would enhance tax bases of area's communities and state treasuries.

CONTRIBUTIONS TO THE
CADDO-BOSSIER PORT COMMISSION
BY
STATE AND LOCAL GOVERNING BODIES
(as of December 31, 1981)

ATTACHEMENT 3.

STATE OF LOUISIANA

\$4 million allocated in 1979 for acquisition of land.

LOCAL GOVERNING BODIES

City of Shreveport	\$ 60,000
City of Bossier City	21,600
Caddo Parish Police Jury	36,000
Bossier Parish Police Jury	<u>14,400</u>
Total	\$ 132,000

ATTACHMENT 5

MASTER PLAN FOR MARINE TERMINAL FACILITIES AND INDUSTRIAL DEVELOPMENT PREPARED FOR CADDO-BOSSIER PARISHES PORT COMMISSION, LOUISIANA, BY TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS, NEW YORK—APRIL 1976

CHAPTER IV WATERBORNE COMMERCE

HISTORICAL

The types of commodities that have been carried in recent years on the Lower Red and the Arkansas Rivers are representative of potential movements on the upper Red River when the proposed navigation channel has been completed. Table 11 shows total annual volume of cargo, broken down by major commodity type, on the lower Red River for the years 1970 through 1973. Five commodities - soybeans, crude petroleum, basic chemicals and products, distillate fuel oil and residual fuel oil - comprised more than 85% of the total commerce on the Red River. Commodities carried on the Red River above the mouth of the Balck River currently are limited to waterway improvement materials. Table 12 and 13 present historical information on cargo moving through the Ports of Little Rock and Tulsa Port of Catoosa on the Arkansas River.

METHODOLOGY

Methods of Estimating Potential Commerce

In the absence of any past or present river commerce experience in the Caddo-Bossier area that would be indicative of future expectations, 1975 and 1985 potential commerce at the proposed port was estimated on the basis of a survey of existing industries in the port tributary area and evaluation of those replies.

The results of the survey assisted in defining existing transportation patterns for commodities susceptible to barge transport. Those commodities that would realize transportation savings between origin and destination by using the proposed Caddo-Bossier Port were identified. The results of the survey and analysis indicated that the prospective cargo using the port could be divided into two groupings; cargo that in all likelihood would use the port and was considered probable, and cargo that was considered an uncertain user of the port. The uncertain cargo movements will depend on the future comparative rates between barge and rail transport. The total potential cargo was considered to be the sum of the probable tonnage and one half of the uncertain cargo tonnage.

TABLE 11
HISTORICAL COMMERCE ON THE RED RIVER

	1971 - 1974 (Short Tons)		
	<u>1971</u>	<u>1972</u>	<u>1973</u>
Soybeans	126,805	145,776	77,319
Marine Shells, Unmanufactured	3,600	2,400	
Crude Petroleum	160,296	214,730	162,715
Sand, Gravel, Crushed Rock	9,646	18,063	
Logs	1,753		
Crude Tar, Oil, Gas Products	22,894	15,167	15,135
Alcohols	50,641	29,400	18,724
Benzene and Toluene	14,005	35,616	32,274
Basic Chemicals and Prod, NEC	14,376	54,780	71,283
Fertilizer and Materials, NEC	2,580	5,125	
Distillate Fuel Oil	66,263	77,324	67,648
Residual Fuel Oil	6,750	175,774	246,368
Machinery, Except Electrical	1,000		60
Waterway Improvement Material	13,003	12,589	18,069
Veneer, Plywood, Worked Wood		621	
Fabricated Metal Products		842	
Corn			1,180
Grain Mill Products			1,389
Nitrogenous Chem. Fertilizers			4,990
Lubricating Oils and Greases			6,690
TOTALS	493,612	788,207	723,844

TABLE 12
HISTORICAL WATERBORNE COMMERCE
PORT OF LITTLE ROCK, ARKANSAS

<u>COMMODITY</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Steel	44,860	26,369	9,152
Pipe	2,000	2,357	-0-
Lumber	2,735	4,832	-0-
Fertilizer	2,050	-0-	1,339
Bauxite	-0-	302,358	533,197
Molasses	7,890	4,750	2,850
Vandium Slag	26,402	24,166	29,014
Soil in Bulk	4,361	-0-	-0-
Pitch	1,216	2,581	-0-
Petroleum Products	3,614	129,408	8,418
Hardboard	-0-	4,667	774
Plywood	-0-	232	-0-
Rock	-0-	-0-	111,327
TOTALS	95,128	501,720	696,071

TABLE 13
HISTORICAL WATERBORNE COMMERCE
TULSA PORT OF CATOOSA

<u>COMMODITY</u>	<u>YEAR</u>		
	<u>1972</u>	<u>1973</u>	<u>1974</u>
<u>INBOUND</u>			
Steel	114,587	92,683	88,569
Paper	9,111	5,765	5,553
Liquid	3,383	1,380	3,346
Fertilizer	79,272	43,117	34,382
Other	<u>2,256</u>	<u>145</u>	<u>7,360</u>
Sub-Total	208,609	143,090	139,210
<u>OUTBOUND</u>			
Steel	11,838	860	-0-
Manufactured Products	1,251	6,894	8,147
Wheat	-0-	11,506	122,032
Soybeans	-0-	-0-	2,666
Soybean Meal	-0-	-0-	6,826
Coal	107,532	-0-	3,640
Other	<u>358</u>	<u>-0-</u>	<u>-0-</u>
Sub-Total	120,979	19,260	143,311
TOTALS	329,588	162,360	282,521

Projections of probable and potential commerce beyond 1985 were made on the basis of the appropriate industry growth factors for the port tributary area, which were developed in Chapter III.

CURRENT POTENTIAL COMMERCE

In order to define the present pattern of movements of barge-prone commodities in the tributary area, 1859 questionnaires were sent to all firms having 50 or more employees in a region that encompasses the tributary area and a fringe of counties beyond (Figure-5). The firms were questioned regarding (1) their interest in utilizing public barge terminal facilities if made available in the vicinity of Shreveport on the Red River, (2) specific commodities they would ship or receive through the facility, (3) whether a private barge terminal might be more economical, and (4) whether they would be interested in occupying land in an industrial park

adjacent to the proposed barge port. A sample questionnaire and letter of transmittal are included in the Appendix.

Responses were received from 358 firms, or approximately 19% of the total number mailed, and the percentage return was fairly consistent among the four states included. Of the 358 returns received, 10% responded "Yes", 15% "Possibly" and 75% "No" to the first question (Table 14). A total of 77 questionnaires were sent to companies in the Parishes of Caddo and Bossier, of which 19 (25%) were returned; the proportion of favorable responses to Question Number 1 was even higher than for the State of Louisiana as a whole, with 26% answering "Yes", 37% "Possibly" and 37% "No". Although 81% of all of those receiving questionnaires did not respond, it is presumed that there would be few significant "Yes" or "Possibly" answers from the missing respondents.

TABLE 14
RESULTS OF SURVEY OF NEED FOR BARGE TERMINAL

	<u>Arkansas</u>	<u>Louisiana</u>	<u>Oklahoma</u>	<u>Texas</u>	<u>Total</u>
<u>Responses to Question #1:</u>					
Yes	3	7	0	26	36
Possibly	4	11	2	38	55
No	22	17	19	208	266
Response Omitted	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>
TOTAL	29	35	21	273	358
Replies Missing	118	139	98	1,146	1,501
Questionnaires Sent	147	174	119	1,419	1,859
Percent of Questionnaires Returned	20	20	18	19	19
<u>Distribution of Responses (%):</u>					
Yes	10	20	0	10	10
Possibly	14	31	10	14	15
No	<u>76</u>	<u>49</u>	<u>90</u>	<u>76</u>	<u>75</u>
TOTAL	100	100	100	100	100

Note: Question # 1 said in part, "...do you think you will have use for barge service connecting at a public terminal in the Shreveport-Bossier City area?"

Interviews were held with many (see Appendix A) important potential users of the proposed terminal facilities to supplement information acquired through the questionnaire survey. As a result, one affirmative and five uncertain responses were added to the survey results. These two main sources of information were utilized in combination as the principal bases for estimating the types of commodities and their volumes that may be considered potential to the proposed barge terminal.

The estimated 1975 commerce considered potential to a barge port in the Shreveport-Bossier City area (termed "potential") is comprised of all of the tonnages given with the affirmative responses (termed "probable") plus 50% of the tons with the uncertain responses (termed "uncertain"). The potentials estimated in this way are considered reasonable, especially since they make no provisions for possible favorable answers from those firms that did not respond, nor for any companies with less than 50 employees that might also have use for the proposed barge port. The commerce estimates for 1975 are detailed in Tables 15 and 16 for commodities potential to the public general cargo terminal and special handling facilities, respectively.

The potential tonnages presented on Tables 15 and 16 involve commerce that would be diverted from other modes or routings, with allowances for future growth. The existence of the port will most probably attract new industry which was not covered in the questionnaire responses. Therefore, the commerce projection presented herein can be considered conservative.

In 1968, the Corps of Engineers published a study of proposed improvements to navigation on the Red River, which included estimates of prospective commerce. Recently the New Orleans District Office reviewed and updated the estimates to 1971, but the revisions so far have not been published. The commodity types and volumes contemplated in their estimates generally coincide with those given in Tables 15 and 16 if allowances are made for the probable volumes to and from Alexandria which are included in their estimates. It should be noted that their estimates of Red River commerce were based on the assumption that the proposed Trinity River project would also be in operation. According to a Corps report published in 1968, prospective commerce on the Trinity River in 1966 totaled 8.6 million tons, to be developed in a tributary area that overlaps most of the Texas portion of the Red River tributary area. It is generally believed that the Trinity River project has little chance of proceeding much before the end of this century.

TABLE 15
ESTIMATED ANNUAL COMMERCE POTENTIAL TO PUBLIC
BARGE TERMINAL AT CADDO-BOSSIER PORT
(Thousands of Tons)

Commodity	1975				1985				1995			
	Probable		Uncertain		Probable		Uncertain		Total*		Total*	
	Rec.	Ship.	Rec.	Ship.	Rec.	Ship.	Rec.	Ship.	Rec.	Ship.	Rec.	Ship.
Rubber	11		1		13		3		15		20	
Wood Chips				38		20		53		25		45
Lumber		2		31		15		44		25		40
Paper, incl. Newsprint	3		34	13		20		48		35		20
Chemicals			13	11		7		20		10		15
Steel, Coil	31		39			50		47		75		120
Steel, Bar	5		4			7		6		15		25
Steel, Plate and Sheet	8					8		24		25		40
Steel, Pipe and Tube	12		30	25		15		60		40		65
Steel, Structural	10					5		20		20		30
Steel, Miscellaneous**	37		57			65		72		95		150
Tanks and Vessels		6				3				21		35
Other Fab. Metal Prods. & Machinery		4		1		4				16		25
Scrap Metal		50		120		60		120		60		75
Miscellaneous	1		56	21		30		77		40		50
TOTAL	118	62	354	140	287	129	213	104	440	208	615	315

* Total potential equals Probable plus 50 % of Uncertain, rounded

** Miscellaneous steel includes unspecified quantities belonging in other given steel categories

TABLE 16
ESTIMATED ANNUAL COMMERCE POTENTIAL TO SPECIAL
HANDLING FACILITIES AT CADDO-BOSSIER PORT
(Thousands of Tons)

Commodity	1975			1985			1995		
	Probable Rec.	Uncertain Ship.	Total* Rec. Ship.	Probable Rec.	Uncertain Ship.	Total* Rec. Ship.	Probable Rec.	Uncertain Ship.	Total Rec. Ship.
Corn and Other Grains	168	329	330	208	450	430	500		
Soybean Meal		35	20		60	30	35		
Fertilizer Materials		50	25		58	30	35		
Silica Sand		40	20		55	30	45		
Iron Ore and Concentrates		288	140		310	150	190		
Coal		35	20		45	20	25		
Petroleum Feed Stock		54	25		135	70	90		
Gasoline		-	-			54	25		35
Distillate		-	-			54	25		35
Residual Fuel		107	55			420**	210		280
Petrochemicals		43	20			535	270		360
Coke		150	20		160	30	80		100
TOTAL	168	981	655	208	1,273	1,093	840	545	1,020
									730

* Total potential equals Probable plus 50% of Uncertain, rounded.

** Includes 100,000 tons considered definite movement by respondent but uncertain as to use of public or private facilities

FUTURE POTENTIAL

The questionnaire responses giving estimates of 1985 cargo divertable to the proposed barge port were carefully evaluated and utilized in a manner similar to that used to estimate the 1975 potential. In the few cases where such projections were omitted from the responses, appropriate growth factors were applied to the 1975 estimates. The estimates of 1985 potential commerce through the proposed port also are summarized in Tables 15 and 16.

Each of the commodities having important potential for a barge terminal in the Shreveport-Bossier City area was analyzed and related to appropriate growth factors for the 1985-1995 decade given in Table 10. Derivations of the growth factors for leading commodities are described in the following sub-sections which are divided into two main categories, general cargo and bulk cargo. General cargo includes items that are shipped as units such as machinery, steel products, and material packaged in bales, bags, barrels or boxes. General cargo requires certain care in handling to prevent damage. Bulk cargo on the other hand, includes loose unpackaged material that can be poured or pumped into barges. This category includes more or less free flowing materials such as grain, ore, coal and liquids such as petroleum products.

GENERAL CARGO

Steel

Steel, other than pipe, expected to be shipped into the port tributary area will be largely semi-processed in the form of coils, plates, sheets, bars and rough castings, as well as some structural steel. The industries that utilize such articles are of numerous and varied types, but they may be classified generally as metal fabricators, manufacturers of machinery, and heavy construction. Using the growth factors previously projected for these three types of activity, but giving double weight to the metal fabricators in relation to the others, indicates a probable 5% average annual increase in receipts of steel at the port between 1985 and 1995.

Pipe is used in the tributary area in oil and gas extraction and for the manufacture of numerous products, many of them related to servicing of oil fields. Based on the projected growth in the tributary area of oil and gas production and of manufacturing of fabricated metals and machinery, it is estimated that receipts of pipe at the proposed port will increase by approximately 2% per year between 1985 and 1995.

Shipments of pipe at the port will be considerably less in volume than receipts. The future quantities of such shipments should be a function of the growth in output of the pipe manufacturers, which should be on the order of 5% per annum.

Fabricated Metal Products

Metal tanks and other pressure and storage vessels are important products manufactured in the port tributary area and will contribute significantly to potential barge shipments. Also expected to generate substantial potential shipments are machinery such as pumps, compressors, and chain saws; tools and equipment used in oilfield servicing; and miscellaneous fabricated steel products. The 1985-1995 increases in shipments of each type of product was estimated on the basis of appropriate industry annual growth rates, including manufacture of fabricated metal products (5%), non-electrical machinery (4.5%), and mining of petroleum and natural gas (1.5%).

Scrap Metal

Currently about 70,000 tons of scrap metal is collected in the Shreveport-Bossier area annually, of which half is sold locally and half is shipped by rail to steel mills in various parts of the country. With the installation of a new auto shredder, annual shipments are expected to reach 120,000 tons in the near future, and then to grow gradually with local population increases. With the 1.75% average annual population growth projected for the port tributary area, total shipments could reach 143,000 tons by 1985 and 170,000 by 1995. Demand for scrap iron and steel should grow at a much faster pace than the local supply. The Materials Division of the Office of Business Research and Analysis, U.S. Department of Commerce, has projected a 5.5% annual rate of increase in shipments of steel mill products between 1974 and 1980. Although production after 1980 might slow, it is doubtful that the long-term trend would ever subside to the point where the supply of scrap metals exceeds the steel mill demands.

It is assumed that about 50% of the future scrap metal shipments will move overland to users in Eastern Texas, until navigation to that area is available. Probably 90% of the remaining shipments will move by barge, based on the expected lower freight charges and the greater ease of handling by water than by rail. The annual potential for barge shipments thus could reach 65,000 tons in 1985 and 75,000 in 1995.

The steel mills in Eastern Texas will require considerable

volumes of scrap metal in excess of that received from the Shreveport-Bossier City area, and a large portion may be routed through the Caddo-Bossier port, at least until navigation is extended up the Twelve Mile Bayou to Daingerfield. It was conservatively assumed that there will be no growth in the demand for scrap in Eastern Texas through 1995.

Forest Products

The increase in use of various kinds of paper in the tributary area is most closely allied to the area's population growth. Receipts via the proposed barge terminal should grow correspondingly. Shipment of paper products have been projected from 1985 to 1995 at an average rate of increase of 4% yearly as indicated by forecasts of paper and paper products manufacturing industry.

Similarly, shipments of lumber and wood chips are expected to rise in relation to the anticipated increases in forest product production in the tributary area in the 1985-1995 decade, which have been estimated at about 5% per annum.

Chemicals

Receipts and/or shipments of many chemical products at the port are expected to change as the local chemical industries change, i.e., 5% average annual growth between 1985 and 1995; included are such products as sulphuric acid, caustic, catalyst, fiberglass roving, and certain miscellaneous chemicals. Receipts of coating materials for pipe should grow at 5% per year, as required for pipe manufacture. Various other chemical product movements are not expected to grow as fast, such as plastic material (3%, and average of zero growth for certain users and 5.8% for others), insecticide ingredients (1.75%), and carbon black for automobile tire manufacture (4%).

Rubber

Receipts of rubber in the tributary area are used mainly for the manufacture of automobile tires. It is assumed that tire production will keep pace with motor vehicle production, which is expected to increase at an average annual rate of 4% between 1985 and 1995.

Miscellaneous General Cargo

Other commodities expected to be shipped through the public barge terminal in small quantities include asphalt shingles and castings which should grow at about 5% per year from 1985 to 1995 in proportion to construction activity in the areas served, or in relation to projected growth of metal fabrication industries.

Miscellaneous commodities expected to be received through the proposed public terminal include barite ore, clay, L.P.G. and miscellaneous other fuels, castings, lead, aluminum and glass. The volume of each commodity was projected in relation to the estimated growth in the associated industry between 1985 and 1995. The composite increase so-projected is at the average annual rate of about 3%.

BULK CARGO

Petroleum Bulk Products

Oil refinery products are expected to be shipped in large volumes through special handling facilities at the Caddo-Bossier port. Barge shipments of petrochemicals, residual fuel oil, gasoline, distillate and petroleum coke all should increase at about the same rate as refinery production in general, which has been projected at a 3.4% annual rate of increase after 1985. In view of the current uncertainties of the petroleum industry and world markets, it is considered safer to assume an average growth rate of 3% per annum, although efforts to develop domestic resources and avoid excessive dependence on foreign sources might in fact result in unusually rapid growth.

Petroleum feed stock is brought to the refineries in large quantities for blending purposes. It is estimated that the requirements for feed stock will rise at the same 3% annual rate between 1985 and 1995.

Iron Ore, Coke and Coal

In addition to the scrap metal discussed in an earlier section, the steel mills in the tributary area also require large quantities of bulk iron ore and pellets, coke and coal. It is assumed that demand for these materials will continue to grow after 1985 at an average rate of 2.25% yearly in conformance with projections for the primary metals in industries in the tributary area.

Grain and Meal

Grain and feed dealers are expected to receive through the barge port sizable volumes of corn and other grains, as well as soybean meal. Consumption of their products is expected to rise with increases in livestock herds in the tributary area, and that waterborne receipts of grain and meal therefore will grow 1.5% per annum between 1985 and 1995.

Fertilizer Materials

The receipts of fertilizer materials, which constitute another

large-volume bulk commodity suited to special port facilities, are expected to grow gradually as agricultural production increases from 1985 to 1995, at an average annual rate of about 1.75% for the tributary area.

Silica Sand

No effort has been made to estimate future movements on the Red River of waterway improvement materials or of sand and gravel, since probably none of these bulk materials would require the facilities of the proposed public barge terminal at the Caddo-Bossier port. Silica sand, however, is an important ingredient to the extensive foundry operations in the port tributary area, which probably will continue to grow after 1985 at an average of 5% yearly, consistent with the local rise in manufacturing of iron and steel products.

Foreign Commerce

Some of the potential receipts arrive from foreign sources; typical imports reaching the Caddo-Bossier port include boiler tubing, steel in various other forms, and rubber. Potential exports are pipe, machinery and various metal products. Such foreign commerce must be transshipped between ocean vessels and barges at a deepwater port such as New Orleans and Baton Rouge, or possibly as a part of a LASH or SEABEE operation.

It is doubtful that any of the existing foreign commerce could benefit from the availability of a foreign trade zone at the proposed port. The advantages of such a zone, however, might attract new foreign trade through the port for one or more of the many reasons for establishing the facility, such as savings in duties, insurance, capital commitments, security and salvage, as well as market timing, and opportunities for processing and manipulating. Determining the possible markets for a foreign trade zone at the Caddo/Bossier port was beyond the scope of the current study, but the need for such a facility can be established and government approval obtained by soliciting and accumulating sufficient letters of interest from prospective users.

Total Potential Cargo Movement

Application of the annual growth factors described above to the 1985 potential port commerce estimated from the survey results provides the 1995 projections shown in the last columns of Tables 15 and 16.

All of the foregoing estimates represent potential volumes of port commerce, which can be realized only if adequate navigation and terminal facilities are provided and if local interests actively promote the

use of the proposed port facilities in the Shreveport/Bossier City Area. As a practical matter, it is reasonable to expect that the potentials shown cannot be attained in the opening year of the port's operations because of inertia and a natural resistance to change, but within a very few years aggressive solicitation and promotion should raise commerce levels near to the projected potentials.

Looking farther into the future, if and when navigation is extended up the Twelve Mile Bayou to the vicinity of Daingerfield, considerable commerce would then divert to a new port near the new head of navigation, inasmuch as extending the water-transportation portion of the journey to and from Eastern Texas should provide savings in over-all transportation costs to users in that area. Many types of commodities would be affected, but movements to or from the Northern Louisiana and Southern Arkansas portions of the tributary area probably would not be diverted. The Corps of Engineers' 1968 study indicated that a minimum of 35% of the tonnages prospective to the first phase of the Red River project would not be affected if navigation were extended to Daingerfield. Inertia and firmly established shipping patterns would probably delay the shift away from the by-then traditional use of the Caddo-Bossier port. Moreover, the expected increase in frequency of barge service on the Red River between the Mississippi River and the Caddo-Bossier Parish area could help to depress rates through the local port, which might become a redistribution point where tows are broken down and regrouped for forwarding.

In the unlikely event that the Trinity River project reaches fruition, it too could eventually divert some commerce away from the Caddo-Bossier port. Types of commodities that probably would be affected could include grain, rubber, various chemicals, paper, pipe and other iron and steel articles.

It is likely that, at such time as one or the other of these projects is finally constructed, the Caddo-Bossier port will be sufficiently well established to avoid suffering serious losses of barge commerce.

In summary, it is considered reasonable to anticipate and plan for the total tonnages at the proposed Caddo-Bossier port shown in Table 17 and graphically presented in Figure 6.

TABLE 17
 CADD0-BOSSIER PARISHES PORT
 FORECAST OF TONNAGE
 (Thousands of Tons)

	<u>1985*</u>		<u>1990</u>		<u>1995</u>	
	<u>Probable</u>	<u>Potential**</u>	<u>Prob.</u>	<u>Pot**</u>	<u>Prob.</u>	<u>Pot**</u>
General Cargo Terminal:						
Receipts	45	90	270	530	330	615
Shipments	<u>20</u>	<u>40</u>	<u>120</u>	<u>260</u>	<u>140</u>	<u>315</u>
Total	65	130	390	790	470	930
Bulk Handling Facilities:						
Receipts	40	170	230	930	240	1,020
Shipments	<u>--</u>	<u>110</u>	<u>---</u>	<u>640</u>	<u>---</u>	<u>730</u>
Total	40	280	230	1,570	240	1,750

*1985 volumes assumed to be only 20% of projections. By 1990 a full 100% of projections should be realized.

**Potential includes all of probable tonnages plus 50% of uncertain tonnages.

ATTACHMENT 6.

GRISWOLD ENGINEERING, INC.

707 BENTON ROAD, P. O. BOX 6377
BOSSIER CITY, LOUISIANA 71111
315 - 742-0467

CIVIL AND STRUCTURAL

PROJECT MANAGEMENT

SURVEYING

October 8, 1981

CADDO-BOSSIER PORT COMMISSION
P. O. Box 1983
Shreveport, Louisiana 71166

Re: Port User Survey (1981)

Gentlemen:

Attached is our final report on the survey of potential users of the Caddo-Bossier Port on the Red River.

The survey was intended to identify the various types of industries that would use the waterway and port facilities and to determine the extent of their usage. No effort was made to analyze the economic benefits deriving from the use of the Red River Waterway.

The response to the survey was excellent and tonnage estimates of material to be transported on the waterway are reflective of the dynamic economic growth of the East Texas, South Arkansas, Northwest Louisiana area.

The response to the survey is based on 1981 conditions. Since things change, the Port Commission should continue to monitor the economic growth of the area and update this report in order to have accurate current information.

Sincerely yours,

GRISWOLD/GARVER

Richard F. Griswold

Richard F. Griswold, P.E.

1981 PORT USER SURVEY

GENERAL INFORMATION

In 1976, the Site Selection Study for the Shreveport/Bossier Area port was published. One feature of that study included forecasts of potential tonnage passing thru the Shreveport/Bossier Port facilities.

Since 1976 several changes in the economy of the area have occurred. Principal among these changes is expansion of existing industries and public awareness of the Red River Navigation Project and the benefits deriving from water borne transportation. Because of these changes an update of the 1976 study was commissioned. The purpose of the update study is to identify potential users of the Port and determine the extent of their usage.

METHODOLOGY

In order to identify the potential users of the port, it was necessary to delineate a tributary trade area. The tributary area selected for this study is shown on Figure No. 1. The limits of this tributary area were defined by the proximity to other ports.

For purposes of this study, the tributary area contains three principal geographical regions - East Texas, South Arkansas, and Northwest Louisiana. East Texas includes the towns of Waskom, Marshall, Longview, Tyler, Kilgore, Carthage, and Daingerfield. South Arkansas includes the towns of Texarkana, Arkansas and Texas, Magnolia, Hope, El Dorado, and Ashdown. Northwest Louisiana includes Shreveport, Bossier City, and Ruston.

Once the tributary area was selected, lists of existing businesses and industries were compiled. These Lists came from three primary sources - 1) Local Chamber of Commerces, 2) Industry Directories, and 3) Personal knowledge. These lists were examined and, based on size and type of business, a potential users master list was prepared. A total of 217 companies were listed.

A questionnaire was designed in order to determine the interest of these firms in the use of Red River navigation and the extent of their use. A copy of the questionnaire and transmittal letter are appended to this report. A total of 212 questionnaires were mailed. Four firms were interviewed by telephone and one firm's responses were obtained from the "Benefits Review and Update of the Red River Waterway, Shreveport to Daingerfield Reach," March, 1981, prepared by the Red River Valley Association. The tributary area included 100 firms in the Northwest Louisiana area, 91 firms in the East Texas area, and 26 firms in the South Arkansas area. The questionnaire and all interviews were treated as confidential and, while some firms indicated that no problems would occur with publication of their responses, most firms did not want their responses to become public information.

Tonnage estimate for the recent 12 months were requested as well as forecasts of possible 1990 tonnage. The recent 12 months figures were to assist in the assessment of the accuracy of future forecasts.

RESULTS

Results of the survey were tabulated and comparisons with the 1976 Study were presented. The 1976 Study forecasted for the years 1985 and 1995 while this study used 1990 estimates. An interpolation of the 1976 Study results was made in order to obtain a 1990 figure for comparison.

Tonnage figures for seven major industry types were produced from the responses. These categories are:

- 1) Steel - includes pipe, shapes, plate, bars, scrap, ore, and other raw materials
- 2) Agricultural - feed, grain, and fertilizer
- 3) Cement
- 4) Petroleum - includes crude oil and refined products.
- 5) Petrochemicals - includes petroleum based materials as feedstock for chemical production.
- 6) Forest Products - includes pulp and paper
- 7) Miscellaneous - includes all material not classified above.

These categories were also assigned to two groups - 1) material to be handled at the General Cargo Terminal and 2) material requiring special handling equipment or Private Terminals. The tonnages for Steel, Forest Products, and miscellaneous were placed in the General Cargo Terminal. The tonnages for

Agricultural, Cement, Petroleum, and Petrochemicals were assigned to Private Terminals.

The tonnages are also presented as probable, possible, and potential. Probable tonnages were obtained after analysis from the yes responses to the questionnaire. Possible tonnages were obtained from the possibly responses, and the potential was calculated by adding the probable to one-half the possible.

Tables 1 and 2 present the tonnage responses and Table No. 3 presents response to the questionnaire.

Appendix No. 2 presents a summary of replies to the survey.

TABLE NO. 1

TOTAL TONNAGE

1990

<u>CATEGORY</u>	<u>PROBABLE</u>	<u>POSSIBLE</u>	<u>POTENTIAL</u>
Steel	299,600	3,094,500	1,846,850
Agricultural	200,000		200,000
Cement	25,000		25,000
Petroleum	1,151,418	60,000	1,181,418
Petrochemicals	7,500	455,000	235,000
Timber	24,000		24,000
Miscellaneous	<u> </u>	<u>39,000</u>	<u>19,000</u>
TOTALS	1,707,518	3,648,500	3,531,768
1976 STUDY			2,356,500

TABLE NO. 21990 POTENTIAL TONNAGEGENERAL CARGO TERMINAL

1976 STUDY	789,000
UPDATE	1,890,350

PRIVATE TERMINAL

1976 STUDY	1,567,500
UPDATE	1,641,418

TABLE NO. 3QUESTIONNAIRE AND SURVEY

	<u>1976 STUDY</u>	<u>UPDATE</u>
Total Firms	1859	217
Total Responses	358 (19.2%)	65 (30.0%)
Total Yes	36	22
Total Possibly	54	16
Total No	268	27

CONCLUSION AND COMMENTS

The response to the questionnaire was excellent. A 30% response for the update was realized as compared to a 19.2% response to the 1976 Study. The update survey was probably more selective in the firms interviewed than the 1976 Study and this helps account for the excellent response; however, it is probable that this response was due to the increased awareness of the navigation project. A more extensive survey would probably have lowered the percentage response but would have increased the tonnage forecasts.

The update survey pointed out two main product categories that were reported low in the 1976 Study - Steel and Petroleum. The large tonnage increase in steel was due to the excellent response from Lone Star Steel in Daingerfield. A large portion of the steel tonnage reported herein is attributable to Lone Star Steel. The tonnage figures for that firm were taken from the Red River Valley Association report on the Shreveport to Daingerfield Reach. In this report, the Lone Star tonnage was reported as possible. Lone Star will certainly utilize the Daingerfield Port when constructed, but until that time will most certainly utilize the Shreveport - Bossier Port facility. A large difference in petroleum tonnage from the previous study was also discovered. Several reasons are identifiable for this discrepancy - 1) The unfamiliarity of the writers of the 1976 Study with the extent and impact of the area petroleum industry, 2) Deregulation, of the oil and gas industry, 3) enhanced oil recovery techniques, and 4) refinery expansions. The petroleum industry will be a major user of the Red River Waterway and the Shreveport/Bossier Port. In this report, it must be emphasized that all numbers produced are only estimates. Industry use of the waterway will be based on total transportation economics. Historically, waterborne transportation offers significant cost savings over other modes of transportation, but a lowering of railway rates and the imposition of a waterway users tax could change this situation. Transportation economics encompasses more than just transportation rates. The Port Commission should be prepared to assist prospective industries in the evaluation of the Red River Waterway as a transportation source.

The tonnages reported in this study indicate a probable usage of the general cargo dock amounting to 1,890,350 tons. This figure represents approximately 1200 barges yearly which is the limit of the three barge dock proposed in the Site Master Plan.

The increased tonnage estimate from the 1976 Study also reflects the dynamic economic growth of the Northwest Louisiana, South Arkansas, East Texas area. The economic growth of the area is anchored in the areas of energy, steel, and manufacturing. The lignite mining industry is a new industry to the area and is adding jobs for the local markets, enhanced oil recovery techniques and deregulation have prompted a large growth in the petroleum industry, and manufacturing plants are locating in the area to serve the sunbelt population increase. The future is bright. The Red River Waterway and the Shreveport/Bossier Port are much needed assets for the maintenance of the areas' growth.

GULFPORT HARBOR, MISS.

PREPARED STATEMENT

Senator STENNIS. I'm out of order again, Mr. Chairman, but before I leave, Mr. T. W. Clark, executive director of the Port of Gulfport, has a statement, and I ask unanimous consent it be made a part of the record at this point.

Senator COCHRAN. Yes, of course.

[The statement follows:]

STATEMENT OF J. W. CLARK, EXECUTIVE DIRECTOR, PORT OF GULFPORT, MISS.

Mr. Chairman, distinguished members of the Committee, I am J. W. Clark, Executive Director of the Port of Gulfport, Mississippi. While we are a member of the American Association of Port Authorities and concur with the general policies of that organization, as one of the smaller ports we are confronted by somewhat unique problems arising from the Administration's proposed legislation intended to recover full costs in the future for all U.S. Corps of Engineers deep draft navigation projects, including both new projects as well as operations and maintenance costs for all existing authorized projects. Gulfport is one of about forty ports slated to receive zero funding in FY 1983 unless user fee legislation is enacted during this session of Congress. In effect, we are among the "hostages" pending resolution of this drastic proposal.

Gulfport is a relatively young port, constructed in 1902, but its historical background dates back to the early sixteenth century when Portuguese, Spanish and French explorers discovered Ship Island Harbor in the lee of that barrier island just twelve miles south of the present port. This natural harbor, some twenty feet in depth and approximately three and one-half miles square, was the only natural deep water harbor found on the North American Gulf shoreline. It became an important colonization point, and served as the entry port for New Orleans until the early nineteenth century when steam power enabled vessels to overcome the Mississippi River current. Farsighted men determined that the strategic location of Ship Island Pass was conducive to the development of a deep water channel and port on the coast of Mississippi, and engineers were retained to plan and develop the port project and also an entirely new city which became Gulfport, incorporated in 1898. The port has enjoyed a favored position due to its location as a southern terminus of the present Illinois Central Gulf Railroad and its key position on the main line of the Louisville & Nashville Railroad, thus providing direct North-South and East-West services and nationwide rail connections. The port is also served by over thirty trucklines and the Intracoastal Waterway. These brief references are included to emphasize the fact that the city of Gulfport evolved from the port, and the entire community, the state of Mississippi and the many industries located in the area have a substantial interest in the Port of Gulfport, its maintenance and its future expansion.

At the present time the Port of Gulfport has a project depth of only 30 feet, lower than any of its competing ports, a distinct competitive disadvantage. Following extensive surveys, economic studies and required hearings, the Corps of Engineers recommended deepening of the Gulfport ship channel to 38 feet and the Corps' report was sent to Congress by the Office of Management and Budget in November 1978 for authorization. The Corps of Engineers found the project to have a positive cost/benefit ratio, but the Gulfport channel/harbor project still remains before the Congress as a recommended and approved project. Thus the Corps has provided the appearance of motion without the sensation. In the meantime, industries of Mississippi and sister states have invested heavily in new and expanded plant facilities in the expectation that their imports and exports could advantageously utilize the improved facilities at Gulfport. Steamship lines, agents, stevedores, labor, freight forwarders and other maritime related interests have been directly involved in this project and have expanded their operations with the full expectation that traffic would be substantially increased by reason of the Corps of Engineers' report and the favorable OMB report to Congress in 1978.

During fiscal 1981, a total of 417 oceangoing vessels called at Gulfport, approximately 35 per month, which is about the average for the last five years. In recent discussions with steamship agents, each of these vessel's port expenditures are said to average about \$100,000 per ship, which results in an estimated income to the community and state in excess of \$40 million per annum. When you consider the usual economic multiplier (for ripple effect) applied by economists, this has a tremendous impact on the economy of Mississippi--at least \$125 million. Add to this the payroll and taxes derived from industries doing business in the state in export-import related commerce and we can easily and reasonably estimate the total economic impact on the state to be in excess of \$1 billion. In checking the manifests of vessels calling at Gulfport in recent years, we find that cargoes are handled that include the commerce of 30 states, and two provinces of Canada. Gulfport is now regarded as the number one port of the nation for banana imports, with both Standard Fruit Company (Castle & Cook) and United Brands substantially involved in the distribution of bananas through our port to inland destinations. Other cargoes of substantial tonnage include refrigerated poultry and meats, ilmenite ore (for the nearby DuPont plant which manufactures special paint products used in the treatment of heat resistant metals for supersonic aircraft) rice, forest products, linerboard, steel and metal products, fresh and canned pineapple, and a great variety of general cargo items--much of which is now being transported in growing container traffic. Gulfport also serves the military through regular overseas shipments. Military bases in Mississippi include the U.S. Navy Construction Battalion (SEABEE) Center at Gulfport, Keesler Air Force Base, U.S. Naval Air Station at Meridian, Camp Shelby, NASA, USN Naval Oceanographic Center and National Guard.

Traditionally there has existed a partnership between the Federal Government and the various states and local authorities, with the Federal Government--through the Corps of Engineers--providing the funding for harbors and channels, and state and other non-Federal interests financing the construction of port facilities. This arrangement

dates back to 1824, and billions of dollars have been expended by local interests with the expectation that the Federal Government would continue to honor its share of the "partnership," which evolved from the realization that a joint venture of Federal and local interests was essential to support both national defense and foreign trade. Port interests have progressively expended huge sums in the development and construction of port facilities, but Congress has not authorized a single deep draft navigation project of any size or dimension during the past six years. International trading practices have substantially changed, and the nation's port systems are progressively adapting to meet physical demands for highly sophisticated terminals with specialized cargo handling equipment, such as container terminals requiring extensive land area for backup storage. As an example, the great Port of New York no longer has general cargo berths on the Hudson River--there was no available land for backup, and shipping services have shifted to the New Jersey side where large container terminals have been constructed to meet competitive demands. Much the same applies to most of the nation's large ports. Proud New Orleans has had to construct an entirely new port at tidewater at the head of the manmade Mississippi River Gulf Outlet (also now on the "hostage" list) as there is inadequate land area behind the riverfront wharves. The smaller ports have had to adapt too, and Gulfport is no exception. Our port already provides modern facilities such as extremely efficient gantry cranes and conveyor systems for handling boxed bananas, a combination PACECO container crane equipped with catenary gear and bulk storage for ilmenite ore and other bulk commodities, refrigerated dockside warehouses, etc., all constructed with local funding with the full expectation that the Federal Government would fulfill its traditional obligations under the "partnership" concept. Ports must of necessity grow to prosper, and Gulfport has plans for future expansion to meet the demands of projected foreign commerce expected to flow through the port. This includes provision for larger and more automated vessels.

The Administration's proposal to impose user fees on the national port system apparently overlooks the fact that vessel operators are already paying a user fee through the U.S. Customs Tonnage Tax of 6 cents per net registered ton of all vessels entering U.S. ports.

With the cooperation of the U. S. Customs Service I have traced the historical background of the U. S. tonnage tax to the original provision of an Act in 1790, recorded in 70 AMJUR (2nd) legal references under Section 49, which defines the vessel tonnage tax imposed on merchant vessels by U. S. Customs as a "charge upon a vessel according to its' tonnage as an instrument of commerce for the privilege of entering or leaving a port, or navigating the public waters of the country." This obviously is a user tax.

In FY 1981 more than \$5 billion in customs revenues was collected at U.S. ports, of which 30% has been paid over to the U.S. Department of Agriculture, as authorized by the Agricultural Adjustment Act of 1935, as amended (P.L. 74-320). The nation's ports are directly responsible for these revenues, far in excess of Corps of Engineers funding requirements, and this gives rise to the argument that in fact America's ports are actually subsidizing the Federal Government.

The proposed budget contains a request for FY 1983 of only \$465 million for inland and deep draft operation and maintenance, \$150 million below the \$615 million required to perform a moderate level of maintenance of all waterways and harbors. This is affecting the "hostage" ports such as Gulfport. While we certainly recognize the seriousness of the projected budget deficits in years ahead, Administration planners appear to ignore the effect of this appropriation reduction on ports which are the very source of Federal income through customs duties and tonnage taxes, as well as the adverse effect on the industries and service organizations using the various ports and generating substantial income to the Federal Government through corporate and individual taxes. Employment of millions of U.S. citizens directly and indirectly involved with international and domestic commerce is also a serious consideration. The imposition of user fees must inevitably be passed along to the consumer, the U.S. taxpayer, and whether imposed by the Federal Government or the states, call it what you may, this would constitute increased taxation on the citizens of this country. This may be likened to a national sales tax--often proposed but never approved by the Congress. Ports serve not only their immediate community and state, but all national interests.

The \$150 million deleted from the Corps of Engineers requirements for adequate funding to perform a moderate level of maintenance of waterways and harbors during FY 1983 must be restored--and sufficient and liberal time provided to assure effective consideration of the economic impact of the proposed user fee concept on the national economy. This could be a matter of survival for some ports and foreign trade interests. The cumulative effect of user fees on U.S. foreign commerce should be carefully considered, including regional economic development, expansion of foreign markets and the balance of payments. Further, the proposal to impose user fees to recover the costs of maintenance and operation of waterways and harbors appears to be only the "tip of the iceberg," as there are indications even more substantial user fees are yet to be proposed for services rendered by the U.S. Coast Guard, conversion of the fuel tax on inland waterway operators to a ton-mile formula, customs services, airport use, interstate truck lines, etc. If such fees (which will be construed as taxes abroad) are imposed in this country we can expect our trading partners to follow suit with the "domino" effect having an increasingly adverse effect on U.S. foreign trade.

There have been introduced in the Congress several bills related to the imposition of user fees and cost recovery of Corps of Engineers funding for waterway projects, affecting both maintenance and operation of existing projects and new projects, including projects already approved by the Corps and pending authorization by the Congress. The principal differences lie in the approach; some bills favor port by port cost recovery and others favor a national uniform user fee. It was clearly the intent of those remarkable men who drafted the Constitution that all such charges should be uniform and that no preference be given to the ports of any one state over another. While proponents of certain legislation reject the application of Article I of the Constitution on the grounds that the proposed user fees are merely "service" charges, no less an authority than the American Law Division, Library of Congress, states that "...the question of fees for future services, such as dredging and major capital improvements, has not yet been ruled upon by the Supreme Court, or, it appears, by any lower Federal Court....". Also, it should not be forgotten that the larger and more prosperous ports of this country did not arrive at their present prominent status simply by reason of natural endowment. With very few exceptions, the ports of this country were created equal and were developed through Federal funding on the basis of national interest, paid for by the taxpayers of all states. Thus the argument that some ports would cross-subsidize other ports is totally without merit as the taxpayers of all states have indeed in past years "subsidized" the present larger ports. Nor have national trade patterns or the physical operation of ports remained static, witness the development of the Port of Oakland at the expense of San Francisco. A port must live with the demands of time and traffic and the trend will continue. To deny the Port of Gulfport the opportunity to effectively compete through expansion and investment in further modernization, which substantially depends on achieving the already approved project depth of 38 feet, would be grossly inequitable and contrary to the national interest. Any consideration of user fees, if and when to be imposed, must be on the basis of uniform application to avoid discrimination to developing ports.

It is appropriate here to reiterate the position of the American Association of Port Authorities:

"There is a strong consensus among U.S. ports that the Federal funding responsibility should be reconfirmed at 100% for Congressionally authorized new work projects with drafts of 45 feet and less, and 100% for the operation and maintenance of all existing authorized projects. There also is a consensus that there should be a sharing of costs between the local assurer and the Federal Government for new work projects deeper than 45 feet, including the incremental increases in operations and maintenance costs resulting from the new work."

---We concur with this position.

As to the source of funding for ports and waterway projects exceeding 45 feet, recovery should be based on a formula directly related to the benefits enjoyed by the special interests desiring same, and the most practical approach by assuring agencies would be to tie recovery costs for such deep draft projects to the actual draft of vessels in excess of 45 feet, which would accurately and equitably reflect the additional cargo deadweight capacity realized. General cargo ports, including container terminals, do not require depths in excess of 45 feet, and deeper draft installations are primarily used by special interests involved in the bulk cargo trades, such as coal, grain, petroleum products, chemicals, ores, etc.

Should Congress decide, following extensive economic impact studies, that user fees are absolutely essential for other deepwater waterway projects, then the most logical approach would be to accomplish any cost recovery deemed necessary through an increase in the present customs tonnage tax now paid by vessels serving U.S. ports. If the present 6 cents per NRT paid is proper and not in violation of GATT, then surely this would be an acceptable solution to the collection of fees as the amount of such tax would simply constitute an extension of an extant user fee. Under no circumstances should user fees be tied to commodities due to wide variations in volume, relative values, etc.

Finally, we would emphasize the imperative necessity of expediting approval and performance of waterway projects, now a frustrating and lengthy process, resulting in higher costs, economic losses and operational restrictions. More than 20 deep draft navigation projects, long approved by the Corps of Engineers, await Congressional approval. Gulfport's 38 foot channel project is among them.

Thank you for the privilege of presenting this statement.

BAYOU BODCAU AND TRIBUTARIES PROJECT, LOUISIANA

Mr. WELLS. Our next spokesman will be Mr. Dewey Burchett, appearing for the Bossier Levee District.

Senator COCHRAN. Mr. Burchett?

Mr. BURCHETT. Thank you, Mr. Chairman.

Very briefly, on behalf of the board of commissioners of the Bossier Levee District, I wanted to just make several points to you. There is a statement that we ask be included into the record, along with two letters, one from Mayor Anding to me, who asked me to tell you he certainly supports the Bayou Bodcau project. The other letter, which I think is very significant, is from the base commander of Barksdale Air Force Base, Colonel Harrop, who makes several points in his letter, one of which is that the successful completion of this project is absolutely essential to the drainage of this Federal facility, the Barksdale Air Force Base, which he says is worth \$116 million at this point.

Colonel Hertz makes another comment in that on the frequent occasions that flooding almost reaches the runway at Barksdale and has caused an increase in the defense project, and they have to cure that problem with the runway.

Aside from the Federal facility part of it and the drainage of Bossier City, which is absolutely essential—in other words, the internal city—drainage of the Bossier City cannot be improved until there is some way to deliver this water out to the Red River. This project is the only way this can be accomplished.

LOCAL FINANCIAL CONTRIBUTION

The subcommittee has expressed to us, and rightfully so, your desire that there be local interest in this type of project. I am glad to report to you that through the State and local funding, in the next few months we will have spent about \$3 million on part of this project itself. What I am saying is that—of course, this project was on the hit list and stopped. But the local people, police jury, city of Bossier, and the State of Louisiana, through the office of public works, have now taken up part of this project, the drainage portion, and it will spend even more. It will spend \$3 million. I think that is significant for you to know because it demonstrates the intense local interest in this project.

The Corps' capability at this point is \$500,000. As the other speakers have stated, we all recognize the need to balance the budget. We are all going to take our licks and get some reduction. We recognize that. We just ask that you give us what you can and just treat us along with everyone else. But we feel the project is essential.

Thank you very much, Mr. Chairman, Senator Johnston.

[The statement and letters follow:]

STATEMENT OF DEWEY E. BURCHETT, JR., SECRETARY, ON BEHALF OF THE
BOSSIER LEVEE DISTRICT, BOSSIER CITY, AND BOSSIER AND RED RIVER
PARISHES

This statement is presented in behalf of the Board of Commissioners of the Bossier Levee District, the City of Bossier City, and the citizens of Bossier and Red River Parish, Louisiana. My purpose in appearing before you today is to urge and request adequate funding to be provided the U. S. Army Corps of Engineers in the coming fiscal year so as construction on this much needed project begin as soon as possible.

The Bayou Bodcau and Tributaries Project was authorized in 1956, with construction actually beginning eighteen years later in 1974. This project, as originally planned, provided for improvements to Cypress Bayou, Red Chute Bayou, and Loggy Bayou with construction of levees, channel enlargement and drainage structures. Approximately 62 miles of channel enlargement were proposed to be constructed.

Construction on this project progressed until March 1977, when this project along with many other water resource projects throughout the Nation was reviewed at the request of President Carter. Although this project passed all review criteria, an arbitrary decision was made to terminate the Project. Through the efforts of the Bossier Levee District, Bossier Parish Police Jury, local cities and municipalities, State of Louisiana and other local interests, the U.S. Congress in Fiscal Year 1982 appropriated funds for the construction of Bayou Bodcau and Tributaries as it was originally planned and authorized, and we all thank you for this needed action.

During the four (4) year period from 1977 through 1981 in which no construction was being accomplished on this project, the

State of Louisiana, Bossier Levee District, Bossier Parish Police Jury and the City of Bossier City recognizing the importance and significance of this project have let contracts totaling approximately \$3 million for the construction of Flat River Channel Improvements from Red Chute Bayou upstream 8.90 miles. The work is being accomplished in such a way that the planned flood control works may be constructed at minimal cost in the future. Although local interests have continued work on a part of this project and plan to complete the channel improvement work, the size and cost of the remainder of the project is such that Federal help in completing the project is necessary.

The completion of construction on this project is essential for the construction of the Cypress-Black Bayou Watershed Project, an authorized Public Law 566 Project, which will furnish flood prevention and irrigation for agricultural water management through the construction of channel improvements, weirs pumping stations and control structures. By the timely construction of the Bayou Bodcau and Tributaries Project and the Cypress-Black Bayou Watershed Project, the water future of Bossier and Red River Parishes is being provided for and is necessary to meet demands of municipal growth, industrial development, major metropolitan and urban areas, Barksdale Air Force Base and irrigation of crop lands.

On behalf of the Bossier Levee District, the citizen of Bossier and Red River Parishes, we are therefore urging that Congress appropriate \$500,000 for the additional pre-construction planning needed and that adequate additional construction funds be appropriated should a portion of the project be ready for construction in Fiscal Year 1983.

LETTER FROM MARVIN E. ANDING, MAYOR, BOSSIER CITY, LA.

March 25, 1982

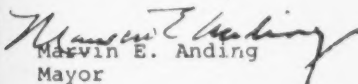
Dewey Burchett, Secretary
 Bossier Levee Board
 1301 Delhi Street.
 Bossier City, La. 71111

Dear Dewey:

I am advised the Levee Board will have the opportunity to present testimony at sub-committee hearings on March 31, 1982 regarding the Bayou Bodcau flood control project. I would like to accompany the Levee Board to these important hearings but I have arranged previously to visit Garland, Texas with our City Council to view a solid waste transfer station, a facility which is an immediate need in our city.

I would hope that the sub-committee will allow you to "read into the record" that my administration still strongly endorses the need for moving forward with Federal assistance to complete the drainage/flood-control improvements of the Bayou Bodcau project. This is a project of such urgency that we have committed \$200,000 from extremely limited municipal funds to the South Flat River portion of this project and we have no other local resources to commit. The orderly development of our community and the protection of residents/businesses now in this area are dependent upon Federal assistance to complete the project.

Sincerely,


 Marvin E. Anding
 Mayor

LETTER FROM COL. STEVE J. HARROP, USAF, COMMANDER, BARKSDALE AIR FORCE
 BASE, LA.

25 MAR 1982

Honorable Marvin E. Anding
 Mayor of Bossier City
 635 Barksdale Blvd
 Bossier City, Louisiana 71111

Dear Mayor Anding

I am aware of your continuing efforts to improve drainage and eliminate flooding problems in Bossier City. I certainly share your concern as both Barksdale Air Force Base and Bossier City depend on Cooper's Bayou and Red Chute Bayou for drainage of flood waters. These channels collect run-off from areas to the north of Bossier City and pass through the base with addition of heavy run-off from our expanse of airfield pavements and developed areas. Over the years, these primary channels have been dredged and improved through the city and the base, but a significant problem area exists at our southern boundary. Cooper's Bayou and its tributary, Mack's Bayou, feed into an unimproved drainage system to the south. This acts as a natural barrier to flow and creates severe flooding on Barksdale Air Force Base.

As you have noted within the city, flooding has become an increasing problem with continued residential and commercial development to the north. Although

I realize that Louisiana law states that the downstream estate must receive the water of the upstream estate, I am concerned that the construction of homes north and northeast of Barksdale is outpacing the ability of the base's drainage systems to accommodate the additional run-off.

The base is now experiencing flooding conditions several times a year during intense rainfall. We have noted through the years that Red Chute Bayou, Cooper's Bayou, Mack's Bayou and Flat River have run bank full even with moderate rains. We attribute this to faster run-off from the north of the base as well as slower run-off from streams, such as Flat River, south of the base.

During heavy storms, many of our main thoroughfares become impassable and flood waters rise to within a few feet of our airfield pavements. A less dramatic, but equally serious consequence of increasing water levels became apparent in the fall of 1978 with the failure of subbase beneath the north and south ends of our runway. A total of 36 concrete slabs had to be replaced to insure continued airfield use. Further, the growing threat of flooding places at risk a real property investment of 116 million dollars including 978 base buildings and 1,034 family housing units.

I am convinced that flooding problems for both Bossier City and Barksdale Air Force Base will not be alleviated until the drainage system to the south is improved. I refer specifically to the Flat River system which serves as the sole drainage channel for all lands lying between the Red River levee on the west and the Red Chute levee on the east. The proposed Corps of Engineer project to improve the Flat River is essential to the solution of this growing problem.

Sincerely


STEVE J. HARROP, Colonel USAF
Commander

CLOSING REMARKS

Mr. WELLS. Mr. Chairman, that concludes our presentation. On behalf of the people in the Red River Valley, we would like to thank the chairman and the committee for the indulgence you have given us here today. We have had a very favorable relationship with this committee in the past and we only hope you can see fit to continue the projects we have down in the basin. Thank you, sir.

Senator COCHRAN. Thank you, Mr. Wells, and thank all of you who have made presentations to the subcommittee this morning. I want to congratulate you on being here and helping the committee in the way you have. I think you are going to have a supportive committee. We have good leadership up here.

Mr. WELLS. You all kind of stick with Senator Johnston. He will do it. [Laughter.]

Senator COCHRAN. That is what we have in mind.

Senator JOHNSTON. We stick together.

Senator COCHRAN. He has been a great leader in the Senate. And now, he will be becoming one of the elder statesmen in the second term. He is getting a little gray, like I am. We appreciate very much the opportunity to work with him on this project.

Senator Johnston?

Senator JOHNSTON. Thank you, Mr. Chairman.

First of all, I want to say to Mr. Stroud I agree with you. I think we need some money for planning on navigation to Index. I will do my best to get it for you. I think we can.

Mr. STROUD. Thank you, sir.

Senator JOHNSTON. Second, I want to say to Mr. Burchett that we are strongly behind the Bayou Bodcau project, Coy Cooper and I are. We revived that from the ashes, as you know. It looked like it was dead and gone. Now it has been revived. We hope we are going to be able to get money for that.

RED RIVER WATERWAY, LA.

And Herman Taylor, let me say to your concerns, I know everybody on Red River and in the association was a little bit concerned about proceeding with all of this local money and local taxes when it looked like the waterway was sort of dying on the vine up here. Well, we were working behind the scenes and we didn't want to make a lot of news releases about it, but it looks like it is going again very strong, and I would say within the next few days you are going to see the reassurances that everything is going full speed—well, not full speed ahead, but it is going. I believe that once we get lock and dam No. 2 under contract, which we ought to before August of this year, that the decision point on the project has passed. Frankly, I thought lock and dam No. 1 was the decision point. But lock and dam No. 2 will particularly be the decision point. What that does is commit certainly this administration, and that means through 1984, to proceed that far, and by 1984 we hope to get lock and dam No. 3 ready for contract.

I am very confident. I have not been as confident about Red River in past years, frankly, as I am right now. We are going to have to wait a little longer than we thought, but we are going to get that project finished.

I just want to tell you one thing. If I don't do anything else while I am in the Senate, I am going to try to make sure we finish that project. There has been too much invested in it, by too many people, over too long a period of time. I am not talking about just the money or the taxes and the local contributions, but the blood, sweat, and tears in working on this thing for many years. All of you, and I won't call your names, but you have been working on that project for a long time.

I don't know whether people actually realize how great this project will be for our whole area. What it can do for the city of Alexandria is almost beyond belief. Maybe they are just beginning to get that picture. I hope they are.

I have seen the public opinion polls and they support it. I think what we ought to do is get all of these Shreveport businessmen who are for it but haven't really focused on it—take them up to Tulsa for a look at that Arkansas port and examine the figures for the ports and communities along the Arkansas River navigation project. They will really have an eye opener, I think, when they see what water transportation can do. It is the future of our entire area, in that one project.

As I say, I have never been quite as confident about it as I am right now. When you see the new benefit-cost ratio—and I hope we will have that within 10 days—then that will be the signal to go full speed ahead.

Thank you very much, gentlemen. This is just an outstanding panel. Again, I didn't disagree with a word you said. Thank you.

Senator COCHRAN. Thank you all for being here.

Mr. WELLS. Thank you, sir.

Senator COCHRAN. We will take a short 2-minute break here while our Red River Valley Association friends depart the hearing room.

PREPARED STATEMENTS

Any additional prepared statements will be included in the record at this point.

[A brief recess was taken.]

[The statements follow:]

STATEMENT OF CARL W. RIEHN, EXECUTIVE DIRECTOR AND GENERAL MANAGER, NORTH TEXAS
MUNICIPAL WATER DISTRICT

I am Carl W. Riehn, Executive Director and General Manager of the North Texas Municipal Water District. Today I am speaking for the coalition of local water suppliers that have contracted for the water supply in the Cooper Lake and Channels Project. This includes the Sulphur River Municipal Water District, City of Irving, and the North Texas Municipal Water District.

Philosophically, man came of his cave and discovered fire and since that time has continued through technological advancement to improve his comfort and standard of living. A mainstay of this advancement has been utilization of water resources to sustain life, cleanse the environment, and to serve man in various multi-purpose capacities. But as we are aware, the Cooper Lake and Channels Project was caught in a time of fear which occurred in the late 1960's and 1970's based on alleged damage to the environment and over-utilization of natural resources including water. This resulted in Federal legislation that allowed small special interest groups to harass, slow down, or stop projects through the selected use of the Federal Courts.

Congress authorized this project in 1955 and after years of preparation the Cooper Lake Project contracts were executed in 1968 and construction started. In 1971 the "Texas Committee on Natural Resources" filed suit and an injunction was placed against the project for lack of an Environmental Impact Statement. In 1981 all Environmental documents were again submitted to Federal Judge William Wayne Justice in the United States District Court for the Eastern Division of Texas awaiting a time to be heard. The local entities have been assured that the project should be released and the construction continued when the Federal Judge has time for his review.

The cost of the project has increased from \$26,529,000 in 1968 to in excess of \$127,000,000 currently. The local interest cost has increased by over 400 percent.

The Sulphur River Municipal Water District represents the three small communities - Cooper, Commerce and Sulphur Springs, that are adjacent to the Sulphur River and geographically close to the project. All three cities proposed to utilize this water for their immediate growth and planned for this project to meet their long range future needs. The delay has been a disappointment causing water shortage and reduced economic activities. The City of Irving and the North Texas Municipal Water District provide service to a portion of the Dallas Metropolitan Area containing approximately 690,000 citizens. The Cooper Lake Project has been an integral part of the water supply planning for their future needs since the mid-1960's. The lack of completion of the project has required additional and more expensive programs to meet the current needs; however, substantial water studies have been completed that reflect the Cooper Lake Project is still the most cost effective program available for future supplies. The NTMWD has verified this position through four major reports prepared by different outside consultants in search for additional water supply in all of the major river basins adjacent to the Upper Trinity area.

The U. S. Army Corps of Engineers reports that if Judge Justice releases the project in accordance with the anticipated time schedule the Corps has the capability and a need for 1.5 million dollars to proceed with the final plans and specifications on the dam. It is requested that these funds be made available so that the project would not be further delayed. The citizens in the service area have already suffered considerable economic loss due to the ability of special interests groups, that do not feel any economic consequences, to effectively stall and prohibit the construction of such a vitally needed project; therefore, any further delay due to a shortage of appropriations on the project, would bring further water supply problems and economic losses to these same citizens. Your inclusion of these funds in the program will be greatly appreciated.

STATEMENT OF WOSTER ANDERSON, PRESIDENT, RED RIVER PARISH POLICE JURY

In behalf of the citizens of Red River Parish, Louisiana, I take this opportunity to convey our feelings to you and members of your committee concerning the Red River Waterway Project. I will not attempt to overwhelm you with elaborate statistics and analyses, but I do hope to increase your awareness and understanding of the need for this project and the importance of it to the people of my area. Please be mindful that, though I speak as a resident of one local area, this project will impact many parishes within Louisiana as well as several counties in our neighboring state of Texas.

Water transportation has long been recognized as an extremely economical means of transporting raw materials and finished goods in bulk quantity, and there is every reason to believe that this will continue to be the case, thereby creating a competitive advantage for those areas of the country which are fortunate enough to have water transportation available. Highways and rail lines are the only methods of bulk transportation available to Northwest Louisiana, and the lack of extremely cheap bulk transportation has very likely played a major role in the depressed economic atmosphere which has prevailed in our area for so many years. The continued progress toward ultimately completing the Red River Waterway will offer bulk transportation advantages to industrial prospects as well as to the large agricultural community now at work within our region.

We feel that the cost advantage of water transportation will be a very important inducement to industrial expansion and to new industrial partners within our region. Red River Parish, and the other parishes of Northwest Louisiana have already made extensive preparations to receive these industries. There are already more than twenty-five (25) industrial parks and sites within the parishes and cities of Northwest Louisiana alone, with more being planned. My own parish of Red River has an active Port Commission which is even now in the process of making a final site selection for a local port. Other parishes are also in various stages of planning for port development, all in anticipation of completion of Red River.

Within recent months, several large corporations have begun making final plans to mine and utilize lignite coal for an energy source for electric power production. For the next thirty (30) years, these operations will be the prime economic forces and very probably the largest employers within the area. The Red River Waterway Project is needed to help develop the full potential of this new and promising industry.

One notable by-product of the burning of lignite coal is fly ash. At the present time, it appears that there will be commercial markets for this material, but it will probably have to be shipped to the market areas. Bulk shipping by barge would be a very positive factor in fully developing the marketability of this by-product.

The Waterway can also keep our local economy from becoming overly dependent on the new lignite industry. The Waterway can help bring diversification to local economies so that there will not be a total economic collapse when the lignite is depleted within thirty (30) to thirty-five (35) years.

We are hopeful that Red River will be continued so that full employment opportunities will be available. Historically, the rural parishes of Northern Louisiana have lagged far behind the State in employment and income. The Louisiana Department of Labor's report for February 23rd of this year indicates that the unemployment rate within Red River Parish was 10.8% in December, 1981, and had climbed to 13.0% in January, 1982. This compares unfavorably with the State rate of 8.6% in December and 9.6% in January.

The new jobs associated directly with the waterway are of prime concern to us. Just as importantly, there will also be long-term jobs related to induced industrial and commercial development. All of the jobs are important to the citizens of Red River Parish as well as the Northwest Region.

New jobs translate directly to increased income for citizens within the area. The latest income statistics available are for 1977, and in that year, annual per capita income in Red River Parish was \$4,246.00, which was only 60.4% of the national per capita for the same year.

The Red River Waterway project is of prime importance to the farmers of Red River Parish. With nearly half of our Parish's land area involved in production of agricultural products, the prospect of having a local port for shipping raw products is encouraging. At the present time, soybeans produced within the parish must be

trucked 160-180 miles to either Lake Charles or Baton Rouge for shipping. The Waterway would alleviate this problem, and this is but one example of decreased costs to the producer and the consumer that can be realized with the completion of the Waterway.

Natural resources of the region, particularly timber and lignite, will be more accessible to markets in the rest of the nation if the waterway is completed. With Red River being tied to the existing water transport routes of the nation the flow of raw materials, agricultural products and finished goods can be accomplished at a savings which will ultimately benefit the entire economy.

Hydro-electric power production on the Red River is currently being evaluated by several areas within the State of Louisiana. This type of power is probably the least expensive to produce, and in a time of ever increasing utility costs, any measure of savings is appreciated by the consumer.

We in Red River Parish have a strong interest in the fate of the Red River Waterway. Without the completion of the Red River Waterway, Red River Parish and the other parishes and counties which have a vested interest in the project will not be able to take advantage of the economic opportunities that the project can potentially bring to the region.

We believe the waterway can and should be continued even though the general economic condition of the country is not as strong as it should be. We in Red River Parish realize that the Congress faces some tough decisions on budget matters, but we also realize that Red River and its continued development is imperative of our region if the State of Louisiana is going to move into the mainstream of economic life of this country.

Your consideration of our position will be appreciated, and we are grateful for the opportunity to relay our comments to you.

STATEMENT OF RAWLINS COLLERAIN, DIRECTOR, DEPARTMENT OF WATER AND SEWERAGE,
SHREVEPORT, LA.

I am Rawlins Collerain, Director of the Department of Water & Sewerage for the City of Shreveport, Louisiana. I am also Chairman-elect for the Louisiana Conference on Water Supply, Sewerage, and Industrial Wastes. In addition, I am a trustee in the Southwest Section of the American Water Works Association, which represents the States of Oklahoma, Arkansas, and Louisiana. Today I speak to you honored gentlemen, while wearing all three hats.

My concern is the water supply for the future of my own state and the surrounding states I represent. This water supply involves municipality, agriculture, and industrial uses and applications. This nation in the very near future will be faced with a water crisis and shortage that will have a more economical impact on this nation than did the oil and energy crisis of the 70's.

On a daily basis, this nation receives 4,235 billion gallons a day in precipitation. Our stream flow averages 1,200 billion gallons a day. We actually only consume 95 billion gallons a day. This nation is only utilizing 2 percent of the waters that are available to it.

Why are we not doing a better job of managing our water? There are many answers to this. One of them is that some of the streams that we could utilize, due to man or to nature, have treatment problems that at today's cost prevent us from fully utilizing the water's that are there and readily available.

One such river that has such an enormous water supply is the Red River that begins in West Texas, passes through the States of Texas, Oklahoma, Arkansas, Louisiana, and terminates in the Mississippi River. This river, through nature and manmade contributions has a total dissolved solids that exceeds the maximum contamination level established by the United States Environmental Protection Agency. One half of the total dissolved solids is comprised of chlorides. Basically, this is common table salt.

This salt comes from natural springs and salt domes that are in northwest Texas and southeast Oklahoma. To give you an idea of the impact of this amount of salt, at the Lake Texoma project on the Red River, 5,400 tons of salt enter Texoma on a daily basis. To give you an idea of the magnitude of 5,400 tons of salt, on a daily basis, it would take 218 eighteen wheelers to haul this amount of salt away from the Red River.

The Corps of Engineers, through its' Tulsa office, has prepared a project called the Arkansas-Red River Basin Chloride Control. Through experiments and based on their calculations, they can reduce by one half the salt loadings into the Red River. As I understand it, the report is completed and is at the Secretary of Army's office in Washington. This report would be delivered to the budget office for funding, except that Mr. David Stockman is not accepting any new projects.

My conclusion then is that if this project is not funded in the near future, we will lose a valuable and precious source of water. This water could be used to increase an agriculture component and reduce the cost of food to the consumer. Industries being forced to leave water scarce areas would be able to use this water.

Part of the Red River Navigation Project was for bank stabilization along the Red. A lot of the total dissolved solids causing the turbidity of the river comes from the washing away of the banks. If these programs are left in tact, the total dissolved solids and turbidity would reduce giving municipalities a chance to utilize water from the Red as a potable source.

I strongly urge Congress to re-examine its' views on these two projects and fund them accordingly. A saying from an ancient mariner, "Water water everywhere not a drop to drink" is a real possibility facing this nation. Thank you Gentlemen for your time.

RESOLUTION OF THE ARKANSAS SOIL AND WATER CONSERVATION COMMISSION

WHEREAS, under authority of P.L. 90-483, approved August 13, 1968, in accordance with the report of the Chief of Engineers dated May 11, 1967, contained in House Document No. 304, 90th Congress, 2nd Session, the Corps of Engineers, United States Army, has initiated pre-construction planning studies with a view to reevaluating the feasibility and economic justification of bank and channel stabilization on the Red River from Denison Dam to the vicinity of Index, Arkansas; and

WHEREAS, under the provisions of Section 221 of the Flood Control Act of 1970 (Public Law 91-611, 42 USC 1962d-5b) as amended by Section 4 of the River Basin Monetary Act of 1971 (P.L. 92-222) non-Federal interests will sign, prior to initiation of construction, a legally binding agreement with the Secretary of the Army to provide the required non-Federal cooperation for the project; and

WHEREAS, existing Federal laws require non-Federal interests to make a cash contribution for a portion of the project costs; to furnish all lands, easements, and rights of way required for construction and maintenance, including alterations and relocations; to hold and save the United States free from damages; and to maintain and operate the completed project in accordance with regulations prescribed by the Secretary of the Army; and

WHEREAS, the Corps of Engineers has requested assurances of non-Federal cooperation; and

WHEREAS, it is understood that such assurances do not

commit the Federal Government to construction of the proposed improvements:

NOW, THEREFORE, BE IT RESOLVED by the Arkansas Soil and Water Conservation Commission:

1. That the Corps of Engineers is hereby advised that the Arkansas Soil and Water Conservation Commission desires the authorized bank and channel stabilization on the Red River from Denison Dam to the vicinity of Index, Arkansas, be constructed.

2. That the Arkansas Soil and Water Conservation Commission hereby gives assurance to the United States that before initiation of project construction the Arkansas Soil and Water Conservation Commission will sign an agreement with the Corps of Engineers in accordance with Section 221 of the Flood Control Act of 1970, as amended, to fulfill the following requirements of non-Federal cooperation:

a. Provide without cost to the United States all lands, easements, and rights of way in the State of Arkansas necessary for construction and subsequent maintenance of the project, including suitable areas determined by the Chief of Engineers to be required in the general public interest for disposal of spoil, and provide necessary retaining dikes, bulkheads, and embankments therefor, or the cost of such retaining works, and also including all additional lands, or rights in land required to insure public control of the recreational development in Arkansas;

b. Hold and save the United States free from damages due to the construction and subsequent maintenance of the project;

c. Maintain all the project works in Arkansas after completion in accordance with regulations prescribed by the Secretary of the Army;

d. Provide without cost to the United States all relocations of utilities, bridges (except railroad), sewers, pipelines, and any other alterations of existing improvements in the State of Arkansas which may be required for construction of the project;

e. Where the appraised value of the land provided for recreational development under a. above amounts to less than 50% of the total first cost of the recreational development, make additional contributions sufficient to bring the non-Federal share to at least that level; which additional contribution may consist of the actual cost of carrying out an agreed upon portion of the development, or a cash contribution, or a combination of both;

f. Operate and maintain for the life of the Federal project the recreational areas and all facilities installed in Arkansas pursuant to the agreement, except that facilities which are integral parts of a structure operated and maintained by the Federal Government shall be operated and maintained under whatever cost-sharing arrangement applies to the operation and maintenance of the basic structure;

g. Assure access to recreational developments in Arkansas to all on equal terms; and

h. Provide the State of Arkansas' proportionate share of the total required cash contribution for land enhancement, such total cash contribution being presently estimated at 26.1% of the Federal cost of construction, the exact amount to be determined when the actual costs

are known; or construct such additional items of work in the project as may be agreed upon by the Federal Government and the Arkansas Soil and Water Conservation Commission.

3. That it is the understanding of the Arkansas Soil and Water Conservation Commission that during preconstruction planning studies the Board of Engineers for Rivers and Harbors will review the report of the Chief of Engineers on Red River below Denison Dam, Louisiana, Arkansas, Oklahoma, and Texas, published as House Document No. 304, Nineteenth Congress, with a view to determining whether any modifications of the recommendations contained therein are advisable with particular reference to the cash contribution required to be made by local interests for bank stabilization work between Index, Arkansas, and Denison Dam, in accordance with the Senate Committee on Public Works resolution dated April 17, 1969.

4. That nothing herein contained shall be so construed as to commit the State of Arkansas either to pay or guarantee the payment of any part of the costs of constructing or maintaining the Red River Waterway Project until such time as funds are appropriated by the Arkansas Legislature or otherwise made available for that purpose.

ADOPTED this 21 day of August, 1981.

ARKANSAS SOIL AND WATER CONSERVATION
COMMISSION

By:

Richard Starr
Chairman

ATTEST:

By:

John P. Sartoris
Director

STATEMENT OF DAVID W. HUTCHISON, EXECUTIVE DIRECTOR, RED RIVER VALLEY
AREA COUNCIL

The Red River Valley Area Council was created by Louisiana Governor David C. Treen through Executive Order 80-20 to deal with the positive and adverse impacts of the construction of locks and dams on the Red River, the Interstate Highway 49, and lignite mining in northwest Louisiana. Two of the main objectives in creating the Council was to "insure the residents of the Red River Valley an opportunity to secure the jobs created by these projects" and "facilitate the participation of Valley small and minority businesses in the federal construction projects themselves."

Interstate Highway 49 is under construction and lignite mining activities should begin in the next six to twelve months. The Red River project is another matter. Under the current funding proposal only lock and dam number one would be completed. Without the other four locks and dams, that would make navigation possible from the Mississippi River to Shreveport, Louisiana, the approximate \$300 million spent thus far on lock and dam number one would have zero impact on the navigability of the Red River. This must not happen.

The future growth of central and northwest Louisiana will be severely curtailed. Construction activities on lock and dam number two, to be located south of Alexandria are expected to employ approximately 500 people with a \$200,000 a week payroll. The Alexandria Labor Area unemployment rate for January 1982 was 11.9 percent, according to figures compiled by the Alexandria branch of the Louisiana Office of Employment Security. This is an increase of 1.7 percent from December 1981 to January 1982. The Red River Valley needs the construction jobs that will be created by the waterway project. The Valley needs the growth potential that the waterway and the other two projects will create.

The growth potential that is tied to the Red River project is more than just the planned port/industrial park complexes in Alexandria and Shreveport. A very important part of the project is the desalinization of the Red River. This will allow water districts and industry located in close proximity to the Red River to make use of this as either a primary or secondary source of water. A few towns along the Red River are already seriously considering this because of dwindling ground water supplies. In this time of high energy costs and diminishing oil supplies, the hydroelectric power potential associated with the Red River cannot be emphasized enough. The City of Alexandria was serious enough about the potential of hydropower to have a feasibility study prepared.

Finally, on March 16, 1982, the Executive Committee of the Red River Valley Area Council unanimously endorsed the attached resolution. The potential for growth in the Red River Valley has never been greater. Continuation of the Red River project will create the environment for job opportunities as well as business expansion. These are two areas that the President and Congress have ranked high on their priority list. What better way to create jobs, relieve the high unemployment rate, and cause business to expand than to continue the Red River Waterway Project which was authorized years ago. The people of the Red River Valley have waited so long for this to become a reality.

RESOLUTION

HELP KEEP THE RED RIVER PROJECT
MOVING FULL STREAM AHEAD

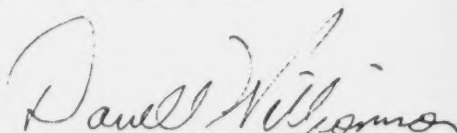
WHEREAS, the River and Harbors Act of 1968 authorized the Red River Waterway Project featuring a navigation channel from the Mississippi River to Shreveport, Louisiana, and Daingerfield, Texas, and stabilization of the Banks of the Red River from the Mississippi River to Denison Dam, Texas, and

WHEREAS, completion of the Red River Waterway will significantly boost the economy throughout the river basin and reduce widespread unemployment of the area, and

WHEREAS, the initiation of work on the John H. Overton Lock and Dam (L & D # 2) will not be possible because of rescission of FY 82 funds and proposed reduction of FY 83 funds,

THEREFORE, BE IT RESOLVED that the Executive Committee of the Red River Valley Area Council hereby request the Congress of the United States to appropriate construction funds for Lock and Dam # 2, bank stabilization funds, and emergency bank stabilization funds.

Alexandria, Louisiana, this 16th day of March, 1982.


DARRELL WILLIAMSON
Chairman

STATEMENT OF ARLIS D. SCOGIN, FIRST VICE PRESIDENT, CADDO LEVEE DISTRICT, LOUISIANA

This statement is presented in behalf of the Board of Commissioners of the Caddo Levee District and the people of Caddo Parish, Louisiana. It is my purpose in appearing before you today to urge that adequate funds be provided to the U. S. Army, Corps of Engineers in the coming fiscal year for pre-construction planning on the West Agurs Levee project in my district.

The West Agurs Levee is located at the northern fringe of the metropolitan area of Shreveport, Louisiana, and protects over 700 acres of industrial lands from flooding. The existing levee was built in 1961 by local interests, serving as an integral part of the Red River main line levee system. As such it should be part of the authorized federal flood control system.

The project "Red River Below Denison Dam" was modified by the Water Resources Development Act of 1976 to include the West Agurs Levee in its authorized flood control system. However, this Levee has not yet been made part of the Federal System because it does not meet certain Federal requirements.

Several alternative plans have been developed by the U. S. Army Corps of Engineers that would bring the existing West Agurs Levee up to Federal Standards. There are no unresolved environmental problems associated with any of the alternative plans and there are no relocation requirements. All local assurances set forth in the authorization are available. But, before construction can begin to bring this levee in

line with Federal Standards, thereby allowing its inclusion in the Federal System, additional planning is needed. In order that the best alternative measure be chosen for all interests.

On behalf of the people of the Caddo Levee District, we, therefore, urge that you appropriate the proposed budget sum of \$63,000 for preconstruction planning on the West Agurs Levee Project in Fiscal Year 1983.

LOWER MISSISSIPPI RIVER NAVIGATION PROJECTS

STATEMENT OF HERBERT R. HAAR, JR., ASSISTANT EXECUTIVE PORT DIRECTOR, PORT OF NEW ORLEANS

ACCOMPANIED BY:

SAM GIALLANZA, SENIOR VICE PRESIDENT, NEW ORLEANS STEAMSHIP ASSOCIATION

CHANNING HAYDEN, NEW ORLEANS STEAMSHIP ASSOCIATION

CAPTAIN DANIEL R. MEYERS, JR., PRESIDENT, ASSOCIATED BRANCH PILOTS FOR PORT OF NEW ORLEANS

Senator COCHRAN. On behalf of the Port of New Orleans we have Mr. Herbert Haar; Mr. Sam Giallanza, senior vice president of the New Orleans Steamship Association; Mr. Channing Hayden of the New Orleans Steamship Association; and Capt. Daniel Meyers, president of the Associated Branch Pilots for Port of New Orleans.

We want to welcome you all to the committee. We have copies of your prepared statements here. They will be made a part of the record. We encourage you to make any summary statements you would like from that.

Mr. HAAR. Thank you, Mr. Chairman. In the interest of time, I would like to just make, as you say, a brief summary statement and have my full statement included in the record.

I am Herbert R. Haar, Jr., assistant executive port director of the Port of New Orleans. I am here to testify on behalf of the board of commissioners of the Port of New Orleans, a unit of local government of the State of Louisiana, on projects of vital interest to the development of Louisiana and neighboring gulf States, the Mid-America States, and the Nation.

PORT COMMERCE

In 1979 the lower Mississippi River deepdraft port area stretching from Baton Rouge to New Orleans and the gulf handled 364 million tons of waterborne—foreign and domestic—cargo, excluding shallow draft through-traffic cargo; thus surpassing Rotterdam and establishing itself as the largest port area in the world. The 1981 preliminary foreign trade—export and import—data indicate that this area handled over 182 million short tons valued at \$41.7 billion—a 21-percent share of the Nation's total.

REDUCTION IN O&M FUNDING

We in the port industry view the administration's proposed reduced funding in fiscal year 1983 for the Army Corps of Engineers' operations and maintenance program with alarm. The administration has classified the Mississippi River-gulf outlet project as a low-volume waterway and proposes zero funding level. We believe the statistics on our tidewater area to be quite impressive.

A total of 35 percent of the Port of New Orleans cargo passing over public facilities is handled in the tidewater port area.

Historically, dredging is required annually on the bar channel and in Breton Sound. If maintenance dredging of the Mississippi River-gulf outlet is suspended, it is estimated that siltation will reduce the depth at the Gulf of Mexico outlet by 3 feet within 1 year. This reduction in allowable draft of ocean vessels wishing to enter the waterway would not only be a telling blow on the economy of this region in particular but would be felt throughout the Nation. Over 11,000 employees depend upon the marine commerce which travels via the gulf outlet for their livelihood. It is imperative that adequate funds for maintenance dredging be provided annually for this important waterway, which had an annual economic impact of \$500 million on this area in 1981.

For these reasons we urge that \$8.25 million be appropriated by the Congress for the Mississippi River-gulf outlet, operation and maintenance, general. This figure presumes that fiscal year 1982 funds in the amount of \$3 million will be utilized in fiscal year 1982 by the award of a dredging contract in June or July 1982.

The Port of New Orleans is the No. 1 port in the Nation with a total of foreign and domestic commerce of 167 million tons in 1980. The Port of Baton Rouge located 125 miles upriver is the fourth largest. Both port complexes are entirely dependent upon timely and adequate dredging of the Southwest Pass to provide access to the gulf.

We are concerned that insufficient funds may be available for maintaining the pass and crossings, assuming from past experiences with spring thaws bringing higher river stages and higher rates of siltation. This condition could result in an initial backlog of O&M funds at the beginning of fiscal year 1983. We strongly recommend that the administration's proposed budget of \$19,580,000 for operation and maintenance, general, Mississippi River, Baton Rouge to the gulf, be increased to include an additional \$10 million for necessary dredging of crossings between Baton Rouge and New Orleans and repairs to training works in Southwest Pass. This proposed funding of \$29,580,000 is less than the Corps of Engineers' capability of \$46,580,000.

Equally important on the lower Mississippi River is the need to continue the efforts in designing various structures comprising the training works of Southwest Pass. These improvements could well decrease annual maintenance costs and, therefore, we recommend that the full Corps of Engineers' capability of \$900,000, construction, general, be appropriated by Congress.

MISSISSIPPI RIVER-GULF OUTLET, NEW SHIP LOCK, LOUISIANA

A new lock to connect the Mississippi River and the Mississippi River-gulf outlet has been long authorized by the Congress and is in a design status. The existing 58-year-old lock built by the Port of New Orleans and leased to the Corps of Engineers is in need of a major overhaul.

We, accordingly, request that engineering and design effort continue and that this effort be funded as proposed in the administration's budget, an amount of \$2 million, the Corps' full capability for construction, general, Mississippi River-gulf outlet.

MISSISSIPPI RIVER (55-FOOT CHANNEL), LA.

A 55-foot channel for the lower Mississippi River from Baton Rouge to the gulf is urgently needed to service the foreign trade and commerce of mid-America, which accounts for 35 percent of the population, 34 percent of the purchasing power, 41 percent of the productive industry, and 40 percent of the employment of the United States.

TONNAGE PROJECTIONS

Over 572,181,000 tons of waterborne commerce, over one-fourth of the Nation's total, moved through this area in calendar year 1978. Additionally, exported coal from the lower Mississippi River region was only 1.5 million tons in 1979 and reached 4 million tons in 1980 and 15 million tons in 1981. But present Port of New Orleans projections, based on actual announced development projects, show that this tonnage could increase to approximately 60 million tons by 1983 and double that figure by 1990. This tremendous interest in the lower Mississippi River, between Baton Rouge and the gulf, is directly related to the ability of the Mississippi River to transport large volumes of coal.

Meanwhile, our competitors are moving aggressively to advance their positions in world trade. Australia, South Africa, Canada, and Poland are major exporters of coal on the world market. The first three countries will comprise the major U.S. competition for markets in Western Europe and Asia through the end of this century. These countries are moving quickly to update their port facilities and harbors, to improve shipping and loading facilities, and to enlarge the world coal fleet to achieve economies of scale. For example, Port Kembla and Newcastle, coal ports in Australia which serve primarily steam coal customers, will be able to accommodate substantially larger vessels—110,000 deadweight ton ships—by mid-1982. These very large colliers can move to Europe at costs perhaps 35 to 40 percent below existing costs. This would make ocean freight rates from Australia roughly comparable with present U.S. freight rates to western Europe.

This is the time for expediting completion of the Mississippi River-gulf outlet enlargement—and that is deepening the lower Mississippi River—and we urge Congress to fully fund the Corps to its full capability of \$5.2 million under general investigations.

REDUCTION IN NATIONWIDE O&M FUNDING

Mr. Chairman, that concludes my part for the Port of New Orleans. Before I ask the other two gentlemen with me to give some short statements, I would like to ask your permission to add for the record a separate statement in my capacity as chairman of the special dredging committee of the American Association of Port Authorities. This statement addresses the \$150 million shortfall in the operation and maintenance funds for fiscal year 1983.

PREPARED STATEMENTS

Senator COCHRAN. We appreciate having that, Mr. Haar. That will be made a part of the record at this point, along with your prepared statement which covers the navigation projects.

Mr. HAAR. Thank you very much, sir.

[The statements follow:]

STATEMENT OF HERBERT R. HAAR JR., ASSISTANT EXECUTIVE PORT DIRECTOR, PORT OF NEW ORLEANS

1. MISSISSIPPI RIVER-GULF OUTLET, LA., MAINTENANCE DREDGING

Assuming that limited Fiscal Year 1982 funds in the amount of \$3 million will be placed under dredging contract in June or July, 1982, we strongly recommend that \$8.25 million be appropriated by Congress for Fiscal Year 1983 under Operation and Maintenance, General. The present absence of any dredging funds is alarming.

2. MISSISSIPPI RIVER - BATON ROUGE TO THE GULF, MAINTENANCE DREDGING AND BANK STABILIZATION

We recommend that Congress appropriate \$29.58 million under Operation and Maintenance, General. The additional funding of \$10 million over the Administration's Fiscal Year 1983 proposal is for necessary dredging of crossings between Baton Rouge and New Orleans and repairs to training works in Southwest Pass. Our proposed funding is less than the Corps of Engineers' capability of \$46.58 million.

3. MISSISSIPPI RIVER - BATON ROUGE TO THE GULF, BANK NOURISHMENT

Continued improvement of structures comprising the training works of Southwest Pass could well decrease annual maintenance costs. We recommend that the full Corps of Engineers' capability of \$900,000, Construction, General, be appropriated by Congress to continue this design effort on bank nourishment, pile dikes and bulkheads.

4. MISSISSIPPI RIVER-GULF OUTLET, LA., NEW SHIP LOCK

We recommend that Congress appropriate \$2 million under Construction, General, Fiscal Year 1983 funds, for the Corps of Engineers to continue the engineering and design effort on this valued project. This amount is the same as that proposed by the Administration and is equal to the Corps of Engineers' full capability. This project will result in hundreds of new jobs during construction and over 10,000 permanent new jobs during the life of the project after completion.

5. MISSISSIPPI RIVER-GULF OUTLET ENLARGEMENT, LA. - FIFTY-FIVE FOOT CHANNEL

We recommend that this project be expedited in order to hasten receipt of enormous benefits that will materialize during as well as after completion of construction of this project. We recommend that Congress appropriate \$5.2 million under General Investigations, the amount equal to the full Corps' capability for this project of deepening the Mississippi River channel.

I am Herbert R. Haar, Jr., Assistant Executive Port Director of the Port of New Orleans. I am here to testify on behalf of the Board of Commissioners of the Port of New Orleans, a unit of local government of the State of Louisiana, on projects of vital interest to the development of Louisiana and neighboring Gulf States, the Mid-America States, and the Nation.

We in the Port industry share the goals of the Administration and this Congress in reducing budget deficits and ultimately balancing the budget. We recognize that we must work closely with each other to achieve these goals. Our contributions as an industry are many, and I would like to share these with you.

The U. S. deep-draft port industry consists of 189 public ports located on the Atlantic, Gulf and Pacific Coasts, and on the Great Lakes. Since World War II, non-federal U. S. port entities have invested more than \$45 billion in new and improved cargo-handling facilities. The cash value of marine terminals serving U. S. deep-draft seaports is estimated to be \$40.4 billion. To meet the future needs of U. S. commerce, the port industry will be investing a billion dollars a year or more through the remainder of this decade to expand and improve terminal handling facilities. In 1980 the total throughput of the U. S. deep-draft seaport system amounted to 1.9 billion short tons of cargo in foreign and coastwise commerce. Of that tonnage, 900.9 million tons represented cargo moving in U. S. foreign commerce, valued at \$297 billion, generating \$5.5 billion in U. S. custom revenues. Federal expenditures in that same year on deep-draft navigation projects amounted to approximately \$350 million. The government is getting a very handsome return on its investment, measured in customs revenues alone. If for no other reason, the government has a very direct interest in assuring the continuous movement of international trade through U. S. ports, for whenever a channel silts up, ocean traffic stops, and customs intake from that source is lost.

In 1979, the lower Mississippi River deep draft port area stretching from Baton Rouge to New Orleans to the Gulf handled 364 million tons of waterborne, foreign and domestic, cargo, excluding shallow draft through-traffic cargo; thus, surpassing Rotterdam and establishing itself as the largest port area in the world. The 1981 preliminary foreign trade (export and import) data indicate that this area handled over 182 million short tons valued at \$41.7 billion - 21% share of the nation's total.

In grain exports alone, the area is the number 1 exporter in the world. In 1981 these grain exports reached 2.1 billion bushels, accounting for 43% of the U. S. total grain exports. Continued growth and development of this port complex is essential to the national economy. Unfortunately, this growth is being inhibited by the lack of adequate deep-water channels - 55-foot depth - for the larger vessels engaged in world commerce as well as frequent occurrences in recent years of less than authorized project depths at the Mouth of the Mississippi River resulting from heavy silting in Southwest Pass.

We in the port industry view the Administration's proposed reduced funding in Fiscal Year 1983 for the Army Corps of Engineers' Operations and Maintenance Program with alarm. The Administration has classified the Mississippi River-Gulf Outlet (MR-GO) as a low-volume waterway and proposes zero funding level. We believe the statistics on our Tide-water (MR-GO) Area to be quite impressive.

A total of thirty-five percent of the Port of New Orleans' cargo passing over public facilities is handled in the Tide-water (MR-GO) Port Area. The steady growth in ship passages and cargo tonnage is the direct result of construction of public facilities and private terminals in this area of the Port. The most recent cargo statistics published by the U. S. Army Corps of Engineers reports 8,227,225 tons of cargo moved through the Mississippi River-Gulf Outlet during 1979, of which seventy-six percent (6,272,419 tons) represented foreign waterborne commerce and twenty-four percent (1,954,806 tons) represented domestic coastwise traffic.

We estimate that the annual export coal tonnage of the Public Bulk Terminal, located in the MR-GO area, will increase from 1.5 million tons during 1982 to 4 million tons over the next few years. The France Road Container Terminal will contain five container ship berths, a roll-on/roll-off ship berth, and 158 acres of associated paved marshalling area when completed in 1989, at which time it is estimated that 4,000,000 tons of containerized cargo will be handled there. In addition, the Port has constructed four more roll-on/roll-off berths where over 500,000 tons of cargo for Central America will be handled.

Also in the MR-GO area, construction has been initiated on the new general purpose Jourdan Road Terminal, and funds have been budgeted to complete the first six berths by 1993. It is located adjacent to the Almonaster-Michoud Industrial District, which contains 7,000 acres of prime industrial area. Plans are well under way to provide a drainage system and commence construction on the first 1,000 acres, where the Port intends to move its Foreign Trade Zone and free its space on the river to provide back-up area for the Napoleon Avenue Wharf. By the year 2000, the City estimates that 50,000 new jobs will be created in this District.

Historically, dredging is required annually on the bar channel and in Breton Sound. If maintenance dredging of the MR-GO is suspended, it is estimated that siltation will reduce the depth at the Gulf of Mexico outlet by three feet within one year. This reduction in allowable draft of ocean vessels wishing to enter the waterway would not only be a telling blow on the economy of this region in particular, but would be felt throughout the nation. Over 11,000 employees depend upon the marine commerce which travels via the MR-GO for their livelihood. It is imperative that adequate funds for maintenance dredging be provided annually for this important waterway, which had an annual economic impact of \$500 million on this area in 1981.

For these reasons we urge that \$8.25 million be appropriated by the Congress for the Mississippi River-Gulf Outlet, Operation and Maintenance, General. This figure presumes that limited Fiscal Year 1982 funds in the amount of \$3 million will be utilized in Fiscal Year 1982 by the award of a dredging contract in June or July of 1982.

The Port of New Orleans is the number 1 port in the Nation (with a total of foreign and domestic waterborne commerce tonnage of 167 million in 1980). The Port of Baton Rouge located 125 miles upriver is the fourth. Both port complexes are entirely dependent upon timely and adequate dredging of the Southwest Pass to provide access to the Gulf. In only three years, 1972, 1976, and 1977, out of the past ten has full project depth been maintained by the Corps of Engineers at Southwest Pass for the entire high water season. We are concerned that insufficient funds may be available for maintaining the pass and crossings, assuming from past experiences with spring thaws bringing higher river stages and higher rates of siltation. This condition could result in an initial backlog of O & M funds at the beginning of Fiscal Year 1983. We strongly recommend that the Administration's proposed budget of \$19,580,000 for Operation and Maintenance, General, Mississippi River, Baton Rouge to the Gulf, be increased to include an additional \$10 million for necessary dredging of crossings between Baton Rouge and New Orleans and repairs to training works in Southwest Pass. This proposed funding of \$29,580,000 is less than the Corps of Engineers' capability of \$46,580,000.

Equally important on the lower Mississippi River is the need to continue the efforts in designing various structures comprising the training works of Southwest Pass. These improvements could well decrease annual maintenance costs, and, therefore, we recommend that the full Corps of Engineers' capability of \$900,000, Construction, General, be appropriated by Congress.

A new lock to connect the Mississippi River and the Mississippi River-Gulf Outlet has been long authorized by the Congress and is in a design status. The existing 58 year old lock built by the Port of New Orleans and leased to the Corps of Engineers is in need of a major overhaul. This undersized lock, now providing this connection, has been carrying its peak design capacity tonnage for years with increasing delays being experienced

by waterway operators transiting the lock. The Corps has estimated that tonnage demand for this lock will increase at the rate of 1 million tons per year for the next 50 years. The Governors of Alabama, Arkansas, Iowa, Louisiana, Mississippi, Oklahoma, and South Dakota have gone on record previously in strong support of this project. This project is vitally important to the future of the Port of New Orleans, the entire Mississippi Valley, all of the Gulf States and has been classified by a former Chief of the U. S. Army Corps of Engineers as the second most important navigation project in the United States. We, accordingly, request that engineering and design effort continue and that this effort be funded as proposed in the Administration's budget, an amount of \$2,000,000, the Corps' full capability for Construction, General, Mississippi River-Gulf Outlet.

A fifty-five foot channel for the lower Mississippi River from Baton Rouge to the Gulf is urgently needed to service the foreign trade and commerce of the mid-America hinterland which accounts for 35% of the population; 34% of the purchasing power; 41% of the productive industry; and 40% of the employment of the United States. Over 572,181,000 tons of waterborne commerce (over one-fourth of the Nation's total) moved through this area in CY 78. Additionally, exported coal from the Lower Mississippi River region was only a million and a half tons in 1979 and reached 4 million tons in 1980 and 15 million tons in 1981. But present Port of New Orleans projections (based on actual announced development projects) show that this tonnage could increase to approximately 60 million tons by 1983 and double that figure by 1990. This tremendous interest in the lower Mississippi River, between Baton Rouge and the Gulf, is directly related to the ability of the Mississippi River to transport large volumes of coal. The barge lines recognize this, and two barge lines--The American Commercial Barge Line and the Federal Barge Line--have invested over \$55 million in modern, efficient rail-to-water transfer facilities, capable of handling 25 million tons of coal per year. The barge lines can transport this coal coming from the states bordering on the upper Mississippi River and its tributaries to the planned coal export terminals in tons of 60,000 tons each.

Peabody Coal Company submitted on February 28, 1981, to the New Orleans District of the Corps of Engineers the following partial statement in support of the deepening of the Mississippi River from Baton Rouge, to the Gulf: "The Lower Mississippi River ports could control 40 percent of the U. S. steam coal export trade by 2000; coal exports in the Lower Mississippi River would rise to 20 million metric tons by 1990, 72 million metric tons by 2000; the benefit to cost ratio of the channel deepening project could increase to 8.9 to 1 by 1985 and 12.6 to 1 by 2000; sixty-two thousand total jobs would be created in the Mississippi Basin area, 31,000 mining jobs would be created; \$5.2 billion in total net annual benefits would occur in the Mississippi River region and \$1.2 billion in net annual benefits and 31,000 total potential jobs would be directly attributable to the deeper channel.

"Many nations of the world are beginning to look to the United States as a major supplier of thermal coal. Until recently, the U. S. has exported only insignificant amounts of steam or thermal. Excluding shipments to Canada, exports amounted to only 2.5 million tons in 1979. In 1980, steam coal exports abroad grew to 16 million tons, and including Canada, topped 26 million tons.

"The U. S. has supplied major portions of the World's metallurgical, or coking coal, needs through harbor outlets on the East Coast for over 50 years. However, the availability of cheap oil and adequate supplies of thermal coal from domestic production or other coal exporters have, to a great extent, kept foreign buyers out of the U. S. steam coal market until this past year.

"Meanwhile, our competitors are moving aggressively to advance their positions in world trade. Australia, South Africa, Canada and Poland are major exporters of coal on the world market. The first three countries will comprise the major U. S. competition for markets in Western Europe and Asia through the end of this century. These countries are moving quickly to update their port facilities and harbors, to improve shipping and loading facilities, and to enlarge the world coal fleet to achieve economies of scale. For example, Port Kembla and Newcastle, coal ports in Australia which serve primarily steam coal customers, will be able to accommodate substantially larger vessels (110,000 dwt.) by mid-1982. These very large colliers can move to Europe at costs perhaps 35-40 percent below existing costs. This would make ocean freight rates from Australia roughly comparable with present U. S. freight rates to Western Europe.

"South Africa, too, is expanding a major port at Richards Bay. It is expected to be completed by 1985. It will handle 150,000 dwt. vessels. This modern facility represents significant public and private investment to advance coal exports. Canada is currently engaged in negotiations to supply \$400 million of coal a year to Japan--4.7 million metric tons of metallurgical and 1 million metric tons of steam coal. The contract is reportedly dependent upon a \$1.7 billion promise of investment in mines, railroads, ports and other facilities to enable the Japanese to load coal. Since railroads, ports and some coal companies are government controlled in these countries, the extent of public investment is not strictly comparable with the U. S., but these events indicate a significant government commitment to the support of exporting coal.

"Other countries are moving decisively to make the public investments which will attract a greater steam coal export trade. In order to achieve its potential market share, the U. S. must also be willing to commit public resources to create the supporting structures necessary for coal export."

By lowering the delivered cost of U. S. coal through port and channel improvement, the United States enhances its competitive position. Predictions of coal buyers' market behavior are highly uncertain; however, failure to take any action to improve our ports may be viewed by potential customers and allies as inconsistent with our national commitment to make coal available for export. Finally, it should be clear that enhancing coal exports, as part of the international effort to increase the production and use of coal, produces benefits beyond those directly attributable to ocean shipping.

This is the time for expediting completion of the Mississippi River-Gulf Outlet Enlargement, and we urge Congress to fully fund the Corps to its full capability of \$5,200,000 under General Investigations.

I have with me Mr. Sam Giallanza, Senior Vice President of the New Orleans Steamship Association, and Captain Daniel R. Meyers, Jr., President of the Associated Branch Pilots, who will file and make brief statements in support of the projects that the Port of New Orleans has recommended.

Thank you.

STATEMENT OF THE AMERICAN ASSOCIATION OF PORT AUTHORITIES

I am appearing before this Subcommittee on behalf of The American Association of Port Authorities in my capacity as Chairman of the Special Dredging Committee. My remarks will be directed specifically at the Administration's proposal to cut back, or reduce, the U. S. Army Corps of Engineers' Fiscal Year 1983 Operations and Maintenance Budget by \$150 million. The port industry views this proposal with alarm.

The United States deepdraft port industry consists of 189 ports located on the Atlantic, Gulf and Pacific Coasts and on the Great Lakes. In 1980, total throughput of the United States deepdraft seaport system amounted to 1.9 billion short tons of cargo. Of that, 900.9 million tons represented cargoes moving in U. S. foreign commerce valued at \$297 billion.

Since World War II, non-federal U. S. port entities have invested more than \$5 billion in new and improved cargo handling facilities. The cash value of marine terminals serving U. S. deepdraft seaports is estimated to be \$40.4 billion, and their replacement cost at approximately \$54 billion. To meet the future needs of U. S. commerce, the port industry will be investing a billion dollars a year or more through the remainder of this decade to expand and improve terminal handling facilities.

Foreign trade presently accounts for over twenty percent of the U. S. annual gross national product of \$3.0 trillion. In the manufacturing sector, one out of eight U. S. jobs involves production for export. More significantly, every region of the United States is dependent upon expanding international trade, and no region is insulated from the economic impact of an imbalance in our international trade. Likewise, every trading region is vitally dependent upon the continuing capability of our ports as "national assets" to provide the critical link between America's productive heartland and its growing overseas markets as the necessary supporting infrastructure for international trade.

The execution of port operations requires the maintenance of adequate and consistent water depths in existing channels, berths, and basins, as well as the development of efficient and modern port facilities. Such operations, though, depend upon maintenance and construction dredging and involve the need to discharge dredged or fill material on a continuing basis.

It is interesting to note that as a result of an October, 1979, survey of U. S. ports conducted by The American Association of Port Authorities Ad Hoc Dredging Committee it was estimated that at that time the impact as a result of reduced port and waterway channel dimensions involved 25 million tons of cargo lost or detained with a value of \$3.4 billion. These figures with the passage of additional time would now be at least twenty percent greater. Additionally, the proposed new shortfall from the President's budget for Operation and Maintenance for Fiscal Year 1983 will create significant increases, in our judgment, of these impacts.

We view the proposed \$150 million shortfall as compounding an already serious problem. From 1970 to 1982, the Corps of Engineers has documented that dredging costs increased by an average of eighteen percent on an annual basis. However, Congressional appropriations for dredging did not keep pace with these cost increases, thus, resulting in a true shortfall in the form of deferred maintenance nationwide in the range of ten to twenty percent.

The Administration hopes to bring sufficient pressure on the port industry to solidify and to hasten support for enactment of waterway user charges. On the contrary, this new budget policy amounts to "cutting off your nose to spite your face." The projected budget "savings" can be adversely offset many fold by reduced U. S. customs revenues, increased costs of cargo movements, a lessening of the U. S. competitive

position in world markets, and a further negative "domino effect" on U. S. agriculture and industry.

Needless to say, we are also concerned that marine safety would also be seriously impacted by the proposed reductions.

Notwithstanding the fact that we fully support the thrust of President Reagan's budget efforts, we cannot agree with the proposed Operation and Maintenance Program cuts which would be, as we previously stated, "penny wise and pound foolish" and, we believe, not in the national interest. We, therefore, strongly recommend that you support budget authorizations and appropriation levels in Congress for Fiscal Year 1983 to ensure that the nation's ports and waterways can continue to make the significant contribution to the national economy that they have in the past years.

Thank you.

STATEMENT OF SAM GIALLANZA

Mr. HAAR. Sir, at this time I would like to ask Mr. Sam Giallanza, senior vice president of the New Orleans Steamship Association, to make a brief statement.

Senator COCHRAN. We are glad to hear from you, Mr. Giallanza.

Mr. GIALLANZA. After Herb has taken all of that time, he wants me to be brief. [Laughter.]

Senator COCHRAN. That is right.

Mr. GIALLANZA. How about that.

Senator COCHRAN. Next time, I'll ask you to go first.

Mr. GIALLANZA. You have all the numbers and all of the reasons, and we support the four projects that Mr. Haar dealt with in his presentation here this morning. I would just like to make a few brief comments.

Senator Johnston said this morning that these projects are not users of revenue, but producers of revenue. I would like to furnish you with some documentation that will confirm that statement, if you will. And that is a result of the action that this committee has taken over the years.

IMPACT OF INCREASED CHANNEL DEPTHS

You know, the river conditions and maintenance dredging allowed us to have a channel depth of 40 feet during the entire year of 1981. As a matter of fact, we began that in June 1980. What did it mean? It means this, that the same 10 upriver elevators that moved 55 million tons of grain in 1980 moved 61 million in 1981, with the same number of elevators. We had a good channel, and maintenance dredging did the job.

Of course, when we move 600 tons of cargo we produce a job, and \$15 per ton of cargo to the local economy—these are generated all the way up the whole Mississippi Valley. So I think that Senator Johnston is right; these projects do produce revenue.

We would like to produce a little bit more, and that is why we talk about the 55-foot channel. We handle many vessels that exceed 100,000 deadweight tonnage. They cannot load to capacity. Many of these ships which call on our port could load to 55 feet, many to 50 feet. But, at present, they are limited to 39 feet.

This is a recommendation of the pilots, which we respect. We don't want to park that waterway. We can't put a big cork like that in there. For every inch that these vessels leave a void of 40 feet, we are leaving behind from world trade 250 tons of grain cargo. Now, that is 3,000 tons on each vessel that is limited to 39 feet. So that 1 foot means an awful lot. Just think what we could do with 55 feet.

Mr. Haar hit upon the savings that the coal and grain would have if we could use the big vessels to their capacity. There would also be a savings in transportation costs. I am sure this will give us a competitive edge over those countries that are fighting hard to get to the grain and coal markets.

One more comment I would like to make. When we talk about the 55-foot channel, we are not talking about 250 miles from the Gulf of Mexico to Baton Rouge. We are really talking about 22 miles in Southwest Bends. That is not an awful lot of digging. You know, if we could run the big ships through there, I think Captain Meyers would do a terrific job of dredging. [Laughter.]

We are cleaning out the pass—you know our ships have shiny bottoms. We have about eight or nine upriver spots that cross into the river. That, of course, would need some special attention to get to 55 feet.

This committee has been certainly good to our area. We appreciate it. Let me say this: You have supported our requests for the new hopper dredge. The dredge *Wheeler* will be ready to go to work in about 60 days. That is good news. Thank you for your support on that.

I appreciate the opportunity to be here today. I really feel at home because I am a Louisianan for about 5 days out of each week and a Mississippian for 2 days. You have good water in Mississippi, because I bring it home from Mississippi to Louisiana to drink. No pun, Senator. [Laughter.]

Senator COCHRAN. We bring back your crawfish. [Laughter.]

And you have other good things in Louisiana that we don't have. We appreciate the good neighborly relationship that we have, except when Old Mississippi plays LSU or Tulane in New Orleans or Baton Rouge.

Glad to have you here, Mr. Giallanza.

Mr. GIALLANZA. Thank you very much.

[The statement follows:]

STATEMENT OF S. GIALLANZA, SENIOR VICE PRESIDENT, NEW ORLEANS STEAMSHIP ASSOCIATION

My name is S. Giallanza. I am Senior Vice President of the New Orleans Steamship Association, whose membership comprises seventy steamship owners, operators, agents and stevedores on the Lower Mississippi River, associated with hundreds of ship owners in international commerce.

I am here today to testify in behalf of four projects vital to the future development of foreign commerce of the ports and innumerable facilities on the Lower Mississippi River from the Gulf to Baton Rouge. These projects, listed below, have impact on the national level in terms of the United States' ability to remain competitive in world trade and should be funded as noted below.

1. Repairs to jetties, dikes and maintenance dredging of Southwest Pass and maintenance dredging of the Mississippi River from Baton Rouge to the Gulf and construction of new anchorage area.
2. Maintenance Dredging of the Mississippi River-Gulf Outlet.
3. Continuation of the Design Program of the Mississippi River-Gulf Outlet New Ship Lock.
4. Development of final plans for the Fifty-Five Foot Channel for Lower Mississippi River.

The importance of maintaining project channel dimensions to the economy of this area is only surpassed by the need for increased channel depths to accommodate the larger ships engaged in foreign trade. The economy of larger vessels has been proven by all maritime nations of the world. The growth in vessel sizes includes all classes — tankers, bulk carriers, OBOs, Ro-Ros, barge carriers and container vessels.

The Mississippi River's deepwater ports, so essential to our nation's economy and defense, continue to experience rapid growth. In 1979 (latest figures available), the Corps of Engineers' statistics reflected that 599,582,000 tons of waterborne commerce, a 25.8% increase over 1976, was moved through the Lower Mississippi.

The Lower Mississippi River is a natural port for the most modern concept in ocean commerce — the barge-carrying vessel. In past years, several operators of LASH and SEABEE vessels have been forced to divert some of their scheduled New Orleans calls. Reduced channel depth has required these vessels to call at other Gulf ports to offload before calling at New Orleans and then call again at another port to topoff before sailing foreign. The diversion of cargo to other ports, because of shoaling in Southwest Pass, added millions of dollars to operating costs and caused the loss of employment opportunities in our area.

Until 1960, this area was served by one grain elevator; this year 12 elevators will supply grain to vessels. Of the more than 2100 vessels that annually load millions of tons of grain at these elevators, nearly all are of the larger bulk-carrier and tanker class. Many, because of shoaling and/or insufficient project draft at Southwest Pass, are forced to sail with slack holds.

If the Lower Mississippi River is to continue as the world's No. 1 port, we must be able to serve the larger, more efficient vessels. To do so, the entrance to our port, Southwest Pass, must not only be maintained at all times at its authorized project depth, it must be deepened.

In addition to the approximately 61 million tons of grain moved in 1981, an 11% increase over 1980, millions of tons of petroleum and petroleum products, again carried by large vessels were moved to and from refineries located on the river between Baton Rouge and the Gulf of Mexico.

The number of vessels that exceed 100,000 deadweight tons calling on the Lower Mississippi River is constantly increasing. There were 717 such vessels in 1981, 173% more than in 1976.

We make a special appeal for appropriations in FY 83 to avoid in the future the serious shoaling problems that existed in Southwest Pass in the past. The following data reflects the shoaling in the Pass which has restricted the movement of world commerce through the Lower Mississippi River.

History of Days during which Southwest Pass was Less than Project Depth

<u>Year</u>	<u>Less than 40 feet at Southwest Pass</u>
1970	205 Days - 56.2%
1971	139 Days - 38.1%
1972	0 Days - 0%
1973	278 Days - 76.2%
1974	227 Days - 62.2%
1975	157 Days - 43.0%
1976	0 Days - 0%
1977	0 Days - 0%
1978	0 Days - 0%
1979	94 Days - 25.7%
1980	60 Days - 16.4%
1981	0 Days - 0%

It should be noted that in 1979 and 1980, after three full years of project depth, we were again faced with draft restrictions at the entrance to the Mississippi River.

As an example, during a period of restriction we made a study of 50 of the many vessels that were unable to load their full cargoes as a result of siltation in the Pass. These vessels, only a few of the 7,500 that call at this Port area annually, left behind 350,000 tons of foreign commerce valued at more than \$50,000,000. On the current market the value of this cargo would be greatly increased. This tonnage, forced to be withheld from export, deprived this area of millions of dollars in economic benefits. To cite but one specific example, during a period of shoaling, a bulk carrier of 122,266 deadweight tons was limited to a loading draft of 36 feet rather than the project depth of 40 feet. This vessel was forced to leave behind 11,328 tons of cargo that had a market value in excess of \$1.2 million.

These statistics do not give the full story. Since July 20, 1980, Southwest Pass has been restricted to 39 feet for vessels over 100,000 DWT's which vessels can generally load beyond 40 feet. Vessels of this size transiting at night are limited to 35 feet. This restriction can be converted to tonnage lost using the concept of "tons per inch" — the TPI is the additional tonnage a vessel can carry for each additional inch of draft. The lost foot of draft to a large vessel with a 250 TPI, means that 3,000 tons of cargo is lost to it.

We cannot emphasize too strongly that draft restrictions will have a detrimental effect on the future of the Mississippi River Port facilities and the important Mississippi Valley they serve. The inability to constantly maintain project depth deters charterers and owners from entering into contracts for loading full cargoes of bulk commodities at local port facilities due to the uncertainty of the controlling draft. The uncertainty of channel depths could cause the entire area from the Gulf to Baton Rouge to become a penalty port area.

As can be seen, one of the most important and difficult jobs in our area is maintaining the 40-foot project dimension at Southwest Pass. The President's budget for Operations & Maintenance, General, Mississippi River, Baton Rouge to the Gulf is \$19.58 million. The Corps' capability in this area is \$46.58 million. The additional \$10 million we request, if approved, would provide, in part, for training dikes at Southwest Pass. These dikes would use the flow of the river itself to help maintain the project depth of the channel. Such dikes would tend to lower dredging costs in the future. We appreciate the need to reduce federal expenditures; however, current investments in this project would result in federal cost savings in the future.

We urge the approval of the President's budget of \$2.0 million and \$0.9 million for Construction, General, Mississippi River, Baton Rouge to the Gulf and Construction, General, Mississippi River-Gulf Outlet, respectively.

The growth of the Port of New Orleans depends, in large measure, on the Bulk Handling Plant and the Port's container and Ro-Ro facilities, among others, located on the Mississippi River-Gulf Outlet. This seaway has a project depth of 36 feet. Shoaling has resulted in the loss of project draft. Controlling depth on this channel is currently 36 feet. For safety reasons transit restrictions apply to vessels with a draft of 30 feet or more. We request that the Congress appropriate \$8.25 million for Operations & Maintenance, General, Mississippi River-Gulf Outlet. This will still result in funding at \$3.0 million less than the Corps' capabilities.

The Public Bulk Terminal and the container terminals are located on the Mississippi River-Gulf Outlet while the grain facilities, many LASH/SEABEE terminals, and the public wharves are located on the Mississippi River. An adequate route between the Mississippi River-Gulf Outlet and the river is essential. The shortest and most efficient route is an antiquated 50-year old lock with a width of 75 feet and limited to a depth of 30 feet. Its maximum capacity has long been exceeded. The waiting time for passage through the lock at present averages 8 to 10 hours, however, waiting time on occasion has been in excess of 24 hours.

An adequate ship lock, 150 feet by 1200 feet by 50 feet, has been authorized; and we urge that Congress provide the President's requested \$2.0 million to support the Corps of Engineers' capability for continuing the design of this project.

The need to deepen the channel serving the deep water area of Louisiana is underscored by the growth of two export cargoes — grain and coal. In 1960, the first grain elevator was built in New Orleans. By 1981, after many additional elevators had been built, grain exports had grown to 66 million tons per year on the Lower Mississippi. A new elevator is scheduled to open at the end of this summer with a through put of 6 million tons per year — creating another 100 to 125 jobs in the area. Studies by the Board of Commissioners of the Port of New Orleans predict that grain exports will reach 150 million tons per year by the Year 1990. Studies by the Board of Commissioners predict Lower Mississippi River coal exports will reach 120 million tons by the Year 1990.

However, these potential levels may only be reached with a 55-foot channel. It is estimated that \$4 per ton or more can be saved exporting grain if the channel can accommodate vessels loaded to 55 feet — \$400,000 or more can be saved on just one ship loading 100,000 tons of grain. Brazil, Argentina, Australia, and Canada are becoming more aggressively competitive in the world grain market. It would not be surprising in the future to find America's competitive edge in world grain trade determined solely by the lower transportation costs noted above.

Combined with the projected growth in grain exports is the potential for explosive growth in coal exports. Here, too, is a potential savings in transportation costs to our customers — \$6 per ton or more if the channel would allow vessels to load to 55 feet. In addition, a 55-foot channel will give added impetus to the construction of needed coal loading facilities. It will provide an inland water transportation route from the Eastern & Mid-Western coal fields. It has been proven that inland water transportation is the most economical way to transport cargo. A 55-foot channel will also provide a U.S. port with a controlling draft comparable with the European ports which will receive the coal. Just as we have competitors in world grain trade, the same is true in world coal trade. The Peabody Coal Company statement referred to by the Board of Commissioners shows that Australia, South Africa and Canada, our major coal competitors, are moving aggressively to provide efficient port facilities for their coal. If the U. S. does not move soon on this project, we will find that the world coal market is yet another market in which U. S. products cannot compete.

The increase in grain and coal exports will have several positive effects on the U.S. economy. Grain, traditionally, has had a positive effect on our balance of payments. The same can be expected of coal exports. But the greatest effect that deepening the channel will have is the creation of new jobs. Based on data from a University of New Orleans study, the increased grain and coal exports through the Lower Mississippi River could result in an additional 35,000 jobs, or more, being created in the area. Based on the impact on the Lower Mississippi River, the jobs created nationally will be very significant. Because of its tremendous positive impact, the Corps' 9.5 to 1 cost-benefit ratio of this \$400 million project may be conservative especially since growth in coal exports were not included.

In order that the strength and growth of the Mississippi Valley will continue, we urge that Congress appropriate the Corps' full capability of \$5.2 million for this important project.

I appreciate the opportunity to appear before the Committee.

SUMMARY OF TESTIMONY

1. Repairs to Jetties, Dikes and Maintenance Dredging of Southwest Pass and Maintenance Dredging of the Mississippi River from Baton Rouge to the Gulf and Construction of New Anchorage Area.

The Lower Mississippi River, from the Gulf to Baton Rouge, ranks as the No. 1 port in the world. If the cargo-carrying capacities of vessels are again restricted by reduced entrance channel depths, this area will rapidly lose its status and this will have a detrimental effect on the National economy. The President's budget appropriation of \$19.58 million could increase the cost of maintaining the channel's project depth in the future. We urge that \$29.58 million for Operation and Maintenance, General, Mississippi River, Baton Rouge to the Gulf, be appropriated. The additional \$10 million would be used, in part, for training dikes at Southwest Pass. This investment will save significant dredging costs in future years. The President's budget fully funds the Corps' Construction, General, Mississippi River, Baton Rouge to the Gulf capabilities and Construction, General, Mississippi River-Gulf Outlet. We urge approval of this funding of \$2 million and \$0.9 million, respectively.

2. The Mississippi River-Gulf Outlet Maintenance Dredging.

The number of vessels using the Mississippi River-Gulf Outlet has continued to increase. Located on this waterway are the Port of New Orleans' Bulk Handling Plant, the new container facilities, the ro-ro terminal and additional facilities under construction which provide newer cargo handling methods to accommodate the larger ships now serving international trade. It is recommended that \$8.25 million be appropriated for Operation and Maintenance, General Funds, Mississippi River-Gulf Outlet. The President's budget contains no funds for this vital channel. The amount suggested is less than the Corps' capability of \$11.25 million.

3. The Mississippi River-Gulf Outlet New Ship Lock.

The design for the urgently needed new ship lock is now underway. This lock, once in operation, will relieve existing hazardous congestion and costly delays to navigation. It will promote the economic growth and development of water-oriented industries along the Mississippi River and the Mississippi River-Gulf Outlet thus promoting the future growth of the Port area of New Orleans. It is urged that the Congress provide the \$2 million requested in the President's budget for FY 83, to satisfy the Corps of Engineers' capability for continuing this project.

4. Fifty-Five Foot Channel for Lower Mississippi River.

It is recommended that the Corps of Engineers' full capability of \$5.2 million be funded in the FY 83 budget. Though \$2.2 million more than contained in the President's budget, the additional funds are justified so the Nation may reap sooner the tremendous benefits of this project.

STATEMENT OF CAPT. DANIEL MEYERS

Mr. HAAR. Mr. Chairman, I would like to ask Capt. Daniel Meyers, if I may, to present a few brief remarks. He is the president of the Associated Branch Pilots in New Orleans. That is the group that brings the ships through the Southwest Pass into the river.

Senator COCHRAN. Welcome, Captain Meyers.

INCREASE IN TRAFFIC

Captain MEYERS. Thank you, Mr. Chairman, Senator Johnston. Let me speak before you today as I have in the past few years. In the interest of time, I just want to say that the increase of business since 1973 of tonnage, we had 3,672 transits through Southwest Pass with vessels whose deadweight tonnage exceeded 50,000 deadweight tons.

In 1973, we only had 262 of those transits. So you can see the increase since the large ships have come in the channel that we have had. The volume of transits has increased since 1973 from 12,428 turns to 16,405 turns in 1981. So it is almost a 333-percent increase in the volume of business that has come with the shipping.

Again, for many years I have tried to get the Pilottown anchorage dredged and with no avail. Congress did authorize us deepening an enlargement of this anchorage 3 years ago. But with the Corps' coordinating its work with other various State and Federal agencies, this project has not yet started.

During a period of intense fog and low river these ships are delayed. When a ship is delayed, it costs a lot of money. I still would like to ask this committee to keep striving to get this money for this anchorage because I think it is not very safe for anchoring these large ships because we can't anchor them up at night. We can't anchor them outside. We lose a lot of time.

We do need a 55-foot channel because the figures furnished by the Corps indicate the benefit-cost project for this deep draft is 9.5 to 1. The Nation's current economic state can ill-afford to drag its feet on something that would return \$9.50 for every dollar.

We appreciate what the committee has done—the pilots. We have gone from a change with the small ships to large ships. In fact, on the 15th of this month we have another 250-tonner coming in just to bunker, which is a large ship, called to that port. The only other one we have had is the 241,000 tons, which made it safely. We need the 55-foot channel for the economy of this country.

I want to thank you gentlemen for all you have done for us.

[The statement follows:]

STATEMENT OF CAPT. D. R. MEYERS, JR., PRESIDENT, ASSOCIATED BRANCH PILOTS

In 1981 my organization made 3672 transits through southwest pass with vessels whose deadweight tonnage exceeded 50,000 tons. In 1973 we only had 262 transits over 50,000 deadweight tonnage. The volume of transits has increased from 12,438 turns in 1973 to 16,405 turns in 1981. Most of these ships over 50,000 deadweight tons could load to a deeper draft if the project depth of 40 feet was increased to 55 feet.

For many years now the Pilottown anchorage has been inadequate. Three years ago the Congress authorized the enlargement and deepening of the anchorage. However, because it is necessary for the US Army Corps of Engineers to coordinate its work with various other federal and state agencies, construction of the project has not yet started. During the frequent periods of intense fog in the lower river and in Southwest Pass, a proper anchorage is essential to safe navigation of the Mississippi River project. While the benefits resulting from construction and subsequent maintenance of this anchorage are somewhat intangible and hard to get a handle on, they are tremendous and a ratio of benefits to cost would necessarily be extremely high. Consequently, we urge that you provide the Corps with the funds required to continue work on this project.

We are concerned about the funding allocations in the president's fiscal year 1983 O & M General budget. Funds in the amount of \$19,580,000 have been allocated for the Mississippi River, Baton Rouge to the Gulf of Mexico project and no money was allocated for operation and maintenance of the Mississippi River-Gulf Outlet.

The \$19,580,000 in the Mississippi River, Baton Rouge to the Gulf of Mexico project is considered only enough money to accomplish the annual dredging. Additional funds in the amount of \$10,000,000 are necessary for surveys, water quality studies, and other operation cost, and for normal maintenance of the jetties, dikes, and other training works. This additional money will bring the funding level for the project to the FY81 and FY82 level. If the additional money for structural maintenance is not provided, future year dredging cost will rise dramatically and rapid shoaling will cause reductions in the usable draft. As you know the nation's number one port, New Orleans, and number four port, Baton Rouge, are located on the Mississippi River. New Orleans is the number one grain port in the world, in excess of 50,000,000 tons of grain are exported from the Mississippi River annually; consequently, the already sagging farm economy in the United States would suffer from any increase in transportation cost that would result from reductions in drafts.

With regard to the Mississippi River-Gulf Outlet, shoaling in the jetty reach has already resulted in a reduction in width restricting the passage of large vessels. Unless money is available for maintenance of this project, further deterioration will take place and draft restrictions will be put into effect. Maintenance requirement on the project total approximately \$8,000,000.

While my organization is directly impacted by the funding level of two aforementioned projects, we are generally concerned about the entire deep draft navigation industry. If the United States is to be competitive in the world trade market, we cannot afford to cause raises in transportation cost. We should direct our attention to improving our waterways in order to reduce transportation cost.

In this light, we request that the Corps of Engineers be funded to its full capability to continue work on a proposed 55-foot deep project in the Mississippi River. Recent figures furnished by the Corps indicate the benefit cost-ratio for this deeper draft project is 9.5 to 1. This nation, in its current economic state, can ill-afford to drag its feet on a project that will return \$9.50 for each dollar spent.

EMPLOYMENT BENEFITS

Senator COCHRAN. Thank you, Captain Meyers. I noticed with interest your observations about our competitive position for international markets in coal and grain, the challenge that we face there. A lot of people don't realize what that means to our economy generally, but specifically to the unemployment problem we face right now.

The statistics I have seen show for every billion dollars in agricultural commodities that we sell in world trade, that 26,000 jobs are created here in the United States. For manufactured goods it is even more, 40,000 to 50,000 jobs for every billion dollars of trade. So it is an immense undertaking to be sure, that we equip ourselves with the transportation system and the facilities for taking advantage of the opportunities we have to do something about our unemployment problems in this way.

This is the best jobs program I can think of. It pays great dividends throughout the country, not just in the localities where the ports are located. Your testimony highlights that and points out why we need to continue to do that kind of commonsense investment in our Nation's ports.

Senator Johnston?

MISSISSIPPI RIVER (55-FOOT) CHANNEL, LOUISIANA

Senator JOHNSTON. Thank you, Mr. Chairman. I just would like to say that the Port of New Orleans has grown to be the largest port of the United States because of the leadership of these men. It will grow a lot more than that if the Congress will accept our leadership and go along with that 55-foot channel. We ought to be dredging 55 feet right now; in fact, last year. I think that the delay is absolutely inexcusable. There is absolutely no reason why we should not be doing that.

Dan, as you say, 9.5 to 1, and probably more than that, because I think there are a lot of those benefits that would accrue, steam coal and other things, that would make it even greater than that. But it looks like this year we are not going to pass any authorizing legislation. The clock is ticking and it is probably a little late this year, although we are going to keep pushing. I hope in the next Congress when we are on the road to a balanced budget, and I hope we can do that this spring, we must do it, but once we get the path, the glide path of the balanced budget sealed into law, then hopefully we can move on to projects like the 55-foot channel. We really must do that.

I pledge to you my very best efforts and my priority efforts to get that project done, along with the other things, like keeping Southwest Pass open, and the Mississippi River-gulf outlet maintenance dredging and et cetera. But the 55-foot channel is a great challenge that we all have.

I want to thank you gentlemen for your good work in the port as well as your testimony here today. Thank you.

Senator COCHRAN. Thank you for being with us.

Mr. HAAR. Thank you very much, Senator Johnston, and Mr. Chairman. I appreciate all the help you have given us over the years and the leadership you have given us today. We couldn't ask for better.

Senator COCHRAN. Hope you have a safe trip back home.
Mr. HAAR. Thank you.

SUBCOMMITTEE RECESS

Senator COCHRAN. The subcommittee will stand in recess until 2 p.m. this afternoon.

[Whereupon, at 12:22 p.m., the subcommittee was recessed, to reconvene at 2 p.m. this same day.]

(AFTERNOON SESSION, 2:06 P.M., THURSDAY, APRIL 1, 1982)

NONDEPARTMENTAL WITNESSES

HEARING PROCEDURE

Chairman HATFIELD. The hearing will come to order.

The purpose of the hearing today is to receive testimony from Members of Congress and outside witnesses on the budget request on funding levels for Federal development projects in fiscal year 1983. This is the subcommittee's seventh session for nonagency witnesses. We have already heard from 500 people or more across the country. The subcommittee has received detailed prepared statements from many other interested parties and these will be reviewed carefully before the subcommittee makes its recommendations for the upcoming year.

We have a large number of witnesses this afternoon and I would ask you to summarize your testimony and highlight it in as brief a fashion as possible, although your full statement will be placed in the record to become part of the printed record of this committee.

Do we have any Members of Congress present?

OREGON COASTAL PORTS

STATEMENT OF WILBUR TERNYIK, VICE PRESIDENT, PORT OF SIUSLAW
ACCOMPANIED BY:

TED WEBER, PORT PRESIDENT

TOM MURRAY, REPRESENTING THE PORTS OF UMPQUA, GOLD BEACH, AND BROOKINGS

F. E. (SHANG) KNIGHT, PORT OF NEHALEM, TILLAMOOK COUNTY COMMISSIONER

STANLEY JUD, PORT OF NEHALEM COMMISSIONER

Chairman HATFIELD. If not, I would like to invite to the witness table from the Oregon coastal ports: the Port of Siuslaw, Mr. Wilbur Ternyik, Ted Weber, port president; the ports of Umpqua, Gold Beach, and Brookings, Mr. Tom Murray; the Port of Nehalem, F. E. (Shang) Knight, Tillamook County commissioner; and Mr. Stanley Jud, Port of Nehalem commissioner.

Those folks will please come to the table at this time.

This happens to be my favorite group of witnesses of all the hearings that I hold. I think I can say that without bias. [Laughter.]

I need not say "Welcome" to my fellow Oregonians who are here today. I want to first of all say that I appreciate not only the time and effort that you made to come back here for this hearing, but I think probably as important are those encounters and brief sessions that we have in visits together out on the jetties or at the projects. And, believe

me, as a visual learner, I really appreciate that opportunity to be involved in those community projects and to see the economic impact stabilizing effect these projects have on those communities. They also provide improved safety factors for the people who utilize those facilities and all the other benefits that flow from this kind of effort. The fact that that national investment brings back moneys to the Treasury in far greater portions than are disbursed from the Treasury makes it, for me, a sound economic venture for the Federal Government to be involved in, not to mention your own local resources that are invested as well.

So, with those words of welcome, Mr. Ternyik, I presume you are the first witness.

SIUSLAW RIVER AND BAR, OREG.

Mr. TERNYIK. Mr. Chairman, my name is Wilbur Ternyik, and I am vice president of the Port of Siuslaw, and I am here today with the president of the port commission, Mr. Ted Weber.

I will summarize my statement to save time. We are here to request the committee to add \$1,429,000 to the Corps of Engineers fiscal 1983 budget for maintenance dredging of the Siuslaw River navigation project and to add \$8,000,000 for the start of construction of the authorized extension of the jetties at the mouth of the river.

Looking on down into the statement, the Corps' report of 1976 recommending further extension indicate the new jetty extension project is designed to eliminate most of the present annual maintenance dredging requirements.

Further, I commend you to the reading the attached articles in the Eugene Register-Guard. The first is an editorial titled, "Ports Aren't That Expendable," and the title of the second, "Port Officials Hear Gloomy Dredging Forecast," by the Corps of Engineers.

REDUCTION IN NATIONWIDE O&M FUNDING

Mr. Chairman, I also appear as a representative and president of the Oregon Coastal Ports Task Force Federation of the 15 coastal ports in Oregon and we are submitting a statement on their concern on the adverse economic impact resulting from the administration's proposed elimination of annual maintenance dredging. And those statements are attached and some of the ports were a little slow in getting them in so we will mail them back to you.

Currently, the Oregon coastal ports have a critical employment situation. The unemployment rate runs from 13.8 percent in Lincoln County to 22.1 percent in Curry County which is the worst. We are going to be hurting very badly. The loss of life will be increased drastically if our jetties into our entrances to all the rivers are not maintained.

Chairman HATFIELD. You answered three of the questions that I expected to ask you. That is pretty good anticipation.

The urgency of this project as it relates to safety factors, threat to human life, you have indicated you feel is highly justifiable and there is a sense of urgency.

Mr. TERNYIK. Yes; this is a justifiable situation. The Corps of Engineers gave us their prediction of what would happen at Siuslaw, for instance, if we missed 1 year of maintenance dredging. The Corps says that the project depth of 18 feet would be reduced to only 5 feet.

Chairman HATFIELD. State again the unemployment situation in Lincoln County.

Mr. TERNYIK. Yes; Lincoln County has 13.8 percent unemployment. Chairman HATFIELD. 13.8 percent?

Mr. TERNYIK. Yes.

Chairman HATFIELD. And this is one of the hardest hit counties, because of its dependency on the lumber industry. So, part of the economy that could be viable if we had these facilities with which to make it operate—this would offset some of that high unemployment.

Mr. TERNYIK. Not only would it offset the unemployment if we get the timber going again, but most of the timber in the upper Siuslaw region is Federal timber. We would return money back to the Federal Treasury—that is slowing up too and it will slow up dramatically if we lose our transportation link.

Chairman HATFIELD. Thank you.

[The statements follow:]

STATEMENT OF WILBUR E. TERNYIK, VICE PRESIDENT, PORT OF SIUSLAW, OREG.

My name is Wilbur TERNYIK. I am vice president of the Port of Siuslaw. I am accompanied here today by the president of the port commission, Mr. Ted Weber.

We are here to request this committee to add \$1,429,000 to the Corps of Engineers fiscal 1983 budget for maintenance dredging of the Siuslaw River navigation project and to add \$8 million for the start of construction of the authorized extension of the jetties at the mouth of the river.

The Corps of Engineers has not yet finished the jetty extension work that was previously authorized and only partially completed.

The River and Harbor Act of July 30, 1958, states: "The north jetty extension be deferred until experience demonstrates in the judgment of the Chief of Engineers that this work is advisable."

The need for this jetty extension has proven advisable and the Corps of Engineers recommended a further extension of the jetties in its report of 1976.

The Corps report of 1976 recommending further extension indicate the new jetty extension project is designed to eliminate most of the present annual maintenance dredging requirements.

It is a well-known fact that if the Siuslaw River jetties system is not completed we will not have any traffic of consequence over this waterway, except during the few summer months, and then only on days when the entrance is as calm as a lake. We urge your assistance in appropriating the maintenance funding required and the funding to initiate construction of the new work authorized.

Thank you.

LETTER FROM ROGER W. McCORKLE, MAYOR, FLORENCE, OREG.

MARCH 26, 1982.

Mr. WILBUR E. TERNYIK,
Chairman, Oregon Coastal Ports Task Force Federation,
Florence, Oreg. 97439

DEAR COMMISSIONER TERNYIK: The city of Florence would like to go on record in opposition to the drastic cuts in the Corps of Engineers' maintenance and dredging budget for fiscal year 1983.

Much of the city's annual income is derived from tourists, and one of the main attractions for our area is the Siuslaw River and the great fishing and crabbing it allows. With the economy in its present condition, we just cannot afford to lose this asset to our community.

If the Port of Siuslaw is not kept open to its authorized dimensions, we will have a tremendous loss of revenue in the months to come, but more important, the loss of lives and property. As you well know, sport fishermen will still attempt to cross the bar.

The city of Florence, therefore, respectfully requests that the Corps of Engineers be funded their normal average navigational maintenance funds in order that they may provide all of the Oregon projects to their congressionally authorized dimensions.

Sincerely yours,

ROGER W. McCORKLE,
Mayor.

STATEMENT OF LANE COUNCIL OF GOVERNMENTS, OREGON

Thank you for this opportunity to address the issue of the proposed budget reductions for small port maintenance dredging.

At its board meeting of March 25, 1982, the Lane Council of Governments, a voluntary association of general purpose and special district governments within Lane County, Oreg., unanimously voted to forward the following findings for your consideration.

The proposed termination of funding of maintenance dredging for small ports directly affects the future viability of the Port of Siuslaw and the Florence, Oreg., area. Some of the expected effects are listed below:

The Army Corps of Engineers and the Coast Guard estimate the annual cost of operation and maintenance of the Siuslaw Channel to be about \$1.5 million. Approximately \$0.5 million of this is spent on the removal of dredged material. If the Reagan proposal passes, this money would have to come from user fees or other sources of local revenue.

The Army Corps estimates indicate that, without maintenance dredging, the Siuslaw Bar will probably shoal from current depths of about 18 feet to a depth of about 6 feet in 1 year.

Corps officials and port representatives have expressed concern that the effects of such shoaling will be devastating to commercial barge traffic, commercial fishing, and sport fishing.

Port officials believe that the termination of maintenance dredging would make the channel impassable to commercial barge traffic. This commerce amounts to an average of 200,000 tons of products (mostly wood) annually shipped through the channel, representing about 35 percent of local mills' capacities.

Port of Siuslaw representatives have voiced concerns, that if the channel shoals to predicted levels, the resultant rough bar conditions will greatly increase the hazard facing commercial and sport fishing vessels that use the Siuslaw.

In conclusion, the Lane Council of Governments Board supports the addition of \$1,429,000 for the Corps' fiscal 1983 civil works budget for maintenance dredging of small ports.

[From the Eugene (Oreg.) Register-Guard]

PORTS AREN'T THAT EXPENDABLE

President Reagan appears determined to wreck the nation's water transportation system.

In presenting his 1983 budget proposals, Reagan has renewed a previous call for new fees on users of federally financed navigation facilities. And he's eliminated appropriations for dredging of some smaller seaports, including those at the mouths of the Siuslaw, Umpqua, Yaquina, Coquille and Rogue rivers on the Oregon Coast.

Congress should be mindful that considerable doubts about additional user fees were raised last year after Oregon Sen. Mark Hatfield exercised his clout as chairman of the Senate Appropriations Committee to require thorough studies. The dredging cuts should also be sidelined now while the pros and cons are examined in depth.

The fee increases proposed by the President would raise only \$448 million — at the expense of crippling the Port of Portland and a long list of other inland harbors.

The dredging appropriation cuts would save only \$150 million next year — at the expense of putting smaller coastal ports virtually out of business. According to the Oregon Coastal Ports Federation, that would leave this state with functioning harbors only at Portland, Astoria, Coos Bay and perhaps Newport.

The economic justification of both Reagan proposals is extremely doubtful, to say the least. Shipments through established deep-water ports will be promoted if user fees are increased in line with federal maintenance costs and smaller ports are completely denied the services of U.S. Army Corps of Engineers dredges. But other

ports less fortunately located, yet valuable, will be all but ruined.

Billions of taxpayer dollars have been invested in U.S. waterway improvements. Some thriving ports might never have been developed without state-federal subsidies and federally financed dredging of river channels and bars.

Now, with fuel and construction costs steadily rising, and with export trade becoming more and more vital to the national economy, the future worth of all ports, including those that are yet of only marginal value, should be carefully assessed before they, and communities dependent upon them, are sold out.

It would be foolish to contend that additional waterway user fees should not be considered, or that navigation outlays should not be reviewed in perspective with other federal expenditures.

But in weighing the overall long-term impacts of the Reagan proposals, Congress should keep in mind that water-borne transportation is inherently cheaper than truck or rail transportation where large tonnages are involved.

Moreover, it must be recognized that local, state and regional economic patterns will be disrupted if water transportation is made suddenly more expensive and less available. The ultimate costs to the nation could be astronomical.

This seems to be another case where the Reagan administration is overzealously advocating questionable, if not imprudent, means of holding down federal budget deficits. Congress should intercede on the side of reason and true economizing.

PORTS OF BROOKINGS, GOLD BEACH, AND UMPQUA, OREG.

Chairman HATFIELD. Mr. Murray, you are next.

Mr. MURRAY. Thank you. I am Tom Murray and I am representing the Ports of Brookings, Gold Beach, and Umpqua.

Realizing the constraints of your time, the prepared statements from those three port districts have been submitted. I recognize the consideration they have received always in the past so I will not detail them now.

The essential points are three: One is that the maintenance dredging omitted from the President's proposed budget recommendations be restored.

And there are two additions that we are proposing: One, continuing the general investigation program that has been underway for about 14 years. And the second is the possibility of you considering the addition of funding to start some jetty extension projects.

REDUCTION IN NATIONWIDE O&M FUNDING

Chairman HATFIELD. Thank you very much.

We have had now seven sessions in this committee. We heard from public witnesses, as I say, from all over the country and they have consistently stated their opposition to and the impacts of excising and omitting the necessary funds for O&M of these ports which would strike a devastating blow not only to the present, but to the future. And this is at a time when we, out of necessity, are trying to find ways to reduce our dependency upon Middle Eastern oil, an area of the world that is so fragile politically, militarily, socially—any change in that area could create an oil interruption at any moment. And, therefore, the demand is so great upon us, not only to find alternative systems of energy, but also to more effectively and efficiently utilize the energy that we now have. So, when you couple that observation with the simple fact that water transportation is the most energy efficient of our major systems of transportation, I find the logic or illogic so overwhelming that I wonder if some of those budget analysts really have analyzed carefully the international implications, the implications of war and peace, the relevance to the energy question, all those others—when they would create this kind of program that would eliminate or so drastically reduce operation and maintenance as to actually put out of commission, out of operation, the ports that are so much a part of the water transportation system, is beyond my comprehension.

Do you have any comment on that observation?

Mr. MURRAY. Yes. The comment that I have is that you omitted one word that I think is important. You commented on the logic. I think missing is the fact that there is no commonsense along with the logic, because in the proposals that have been presented to the Congress in the elimination of waterway maintenance, in effect, negates the capital investments by not only the Federal Government, but the State governments, county governments, and the private sector. It destroys, in effect, the most important system of transportation upon which this country was founded and which it must rest and progress in the future, especially so in the times that are now before us.

Chairman HATFIELD. Obviously, we are not in disagreement.

Mr. MURRAY. No, sir, not at all.

Chairman HATFIELD. Thank you very much, Mr. Murray.

[The statements follow:]

STATEMENT OF LEROY F. WRIGHT, CHAIRMAN, PORT OF BROOKINGS, OREG.

My name is Leroy Wright. I am Chairman of the Brookings Port Commission which is responsible for overseeing the Federal navigation project on the Chetco River.

The Port of Brookings requests this Committee to consider adding \$472,000 to the fiscal 1983 budget recommendations now before you.

The Corps of Engineers indicates this additional funding capability, if appropriated, will, with weather permitting, provide 23 days of dredging time on the Chetco River navigation project.

The additional dredging will restore project dimension, thereby removing shoals in the navigation channel that result from the short and uneven jetties at the mouth of the river.

We also ask this Committee to consider adding \$4,000,000 to initiate construction of the authorized 750-foot extension of the north jetty and a 1,250-foot extension of the south jetty.

The modification of this navigation project is designed to extend the jetties to an even length and to a deeper depth in the ocean, thereby eliminating some of the annual maintenance dredging requirements. The short south jetty contributes to the annual shoaling of the entrance.

The exceptionally high rate of unemployment in the port's tributary area resulting from months of closure of the major manufacturing forest products complex; the distressed state of the large commercial fishing fleet operating from the port; and the dire financial condition of the Port itself, makes it imperative that the Corps of Engineers' maximum capability for maintenance dredging be accomplished to relieve any vessel delays causing further economic distress to the community and those using the port facilities.

We urge your favorable consideration of the additional funding requested here.

Thank you.

STATEMENT OF EDWIN K. HIRTE, PRESIDENT, PORT OF GOLD BEACH, OREG.

My name is Edwin K. Hirte. I am President of the Port of Gold Beach, Oregon.

We ask this Committee to add \$90,000 to the Corps of Engineers' fiscal 1983 budget to resume the General investigation to reinforce the breakwater protecting the existing small boat basin and harbor facilities, and an addition of \$1,315,000 for maintenance dredging of the Rogue River. The reinforcement of the breakwater is long overdue.

The need for maintenance dredging is desperate. The harbor facilities at the mouth of the Rogue River are unuseable about six months of each year due to shoaling of the river channel leading to the boat basin. The elimination of dredging funds in fiscal 1983, as now proposed by the Administration, will reduce the channel entrance to about a 2-foot depth after the first year without maintenance dredging. This will close the port at Gold Beach for all practical purposes. It will also render useless the substantial public and private investments made in port-related facilities.

The Corps of Engineers General Investigation cost on this project to date is estimated at \$802,000. This investigation has been underway, off and on, since 1966, some 15 years.

Twice the Corps has had its prestigious Tidal Hydraulic Committee review and report on problems with the malfunctioning jetty system at the mouth of the Rogue River. Its first report was published in 1970.

The latest phase of the general investigation study is a hydraulic model study of the navigation project conducted at the Corps Waterways Experiment Station at an estimated cost of \$290,000.

The preliminary results of the model testing have been made available to the Port of Gold Beach. The Congressionally-authorized jetty system at the mouth of the Rogue River has not yet been tested on the model. The Port is requesting this test to be done before the Corps comes to any conclusion about the best engineering solution to the obviously deficient navigation system now in existence.

The crux of the problem is best summarized by the Corps of Engineers itself in the following paragraph from Supplementary Report No. 3, to General Design Memorandum, 4 February 1964, which reads:

"18. DISCUSSION. - The entrance to Rogue River at Gold Beach has continued to shoal annually since completion of the authorized project in 1961. The shoaling appears to be caused by entrance orientation which allows northwesterly waves to move material directly into the entrance, along the south jetty, forming the shoaled area at that location. Winter and spring freshets, generally, move this material out of the entrance; however, southerly drift deposits the material north of the north jetty, ready to move back into the entrance when currents change to a northerly drift during late spring and summer, repeating the cycle." (southerly and northerly in above quote are meant to be upcoast and downcoast, respectively)

The lead sentence in the conclusions of this same Supplementary Report No. 3 states:

"Indications are that the entrance orientation is the prime cause of the shoaling problem during spring and summer."

The deficient design of the jetty system constructed at the mouth of the Rogue River by the Federal government has caused economic havoc to the port and community of Gold Beach, Oregon. We need help, and we need it soon if there is to be an economic base in which to survive in this port-oriented community.

Thank you.

STATEMENT OF WILLIAM KARCHER, PRESIDENT, PORT OF UMPQUA, OREG.

My name is William Karcher. I am President of the Port of Umpqua.

I am here to ask that this Committee add \$1,688,000 to the Corps of Engineers 1983 budget for maintenance dredging of the Umpqua River. The President's budget recommendations to Congress omits all funds for maintenance dredging of the Umpqua River navigation project in fiscal 1983.

The Corps of Engineers estimates that 1,119,000 cubic yards of material must be dredged from this channel to keep it to its authorized dimensions (26 feet in the entrance and 22 feet in the river channel) and to remove sand shoals between the widely-spaced jetties which contribute to hazardous navigation conditions in the entrance. Without annual maintenance dredging, the Umpqua River channel system would be restricted to summer use only, and then by shallow draft vessels crossing the entrance.

The loss of yearround use of the Umpqua River channel system would eliminate the waterborne movement of petroleum products inbound to a major pulp and paper plant on tidewater, along with the outbound movement of major lumber and gravel tonnages. More important, the restriction of the authorized channel dimensions would force closure of the largest ship repair yard on the Pacific Coast between Portland, Oregon, and the San Francisco bay area. The Umpqua Marine Ways, located on the river in Reedsport, now handles medium sized federally-owned vessels of the U.S. Coast Guard, the National Oceanographic and Atmospheric Administration, and the U.S. Army Corps of Engineers. This ship repair company presently employs 230 people, and is now negotiating with the U.S. Navy for a master ship repair contract.

The Corps of Engineers long-time program for improving this unique 3-jettied river entrance was to rehabilitate the deteriorated north jetty; extend a partially completed training, or supplementary south jetty; and then dredge out the excessive sand that had infilled the unusually wide 1800-foot entrance space between the jetties. The Corps' dredging program for fiscal 1983 would remove some of the excessive sand infill.

Maintenance dredging is still required to make the newly-improved jetty system and waterway useable on a year-round basis, and is essential to the barge traffic, commercial fishing, and ship repair industries that sustain the economic base of the region served by the navigation project.

We urge your assistance in adding the Corps' capability funding for this proposed dredging effort.

Thank you.

PORT OF NEHALEM, OREG.

Chairman HATFIELD. Mr. Knight, you are next.

Mr. KNIGHT. Mr. Chairman, I am Shang Knight, chairman of the Tillamook County Commission of Oregon. It is a pleasure to make this long trip even though we are not asking for any funding. The last three times we were here, we asked for funding and you and your committee did a fine job in providing funding for the twin jetties of Nehalem.

Our main purpose this year is to simply say, "Thank you," and we hope that when the jetty is completed that you will be able to help us celebrate the final restoration of the twin jetties at Nehalem.

Chairman HATFIELD. That will be a joyful event. I will be glad when we can have nothing but a thank you session rather than a plea for more funds. Thank you very much.

Do you have any comments?

Mr. JUD. I echo the "Thank you."

Part of the things that don't show up in the unemployment figures are the number of log trucks that are hauling rocks for the jetty—these are self-employed people; they don't show up in the unemployment data. So this has a double impact right now. We appreciate it.

Chairman HATFIELD. Mr. Weber.

Mr. WEBER. I am rather new at this; I think it has all been said. Thank you very much.

Chairman HATFIELD. Thank you very much, gentlemen, for your succinctness and help with this program.

PREPARED STATEMENT

Mr. TERNYK. Senator Hatfield, I would just like to say that I have submitted a comprehensive statement from the Oregon Coastal Ports Federation that I would like included in the record.

Chairman HATFIELD. Yes; we have that statement and it will be incorporated in the record at this point.

[The statement follows:]

STATEMENT OF WILBUR E. TERNYK, PRESIDENT, OREGON COASTAL PORTS FEDERATION

The situation in the Oregon coastal zone today is indeed grim with unemployment figures reaching 24 percent in some counties. The timber industry in Oregon is truly flat on its back due to high interest rates. Our fishermen are facing eminent extinction due to a chaos of court decisions making intelligent resource management impossible. Now added to this is the possibility of total shutdown of all but three of Oregon's coastal ports due to proposed maintenance dredging budget for fiscal 1983. There is also the real possibility that both the Port of Coos Bay and the Port of Tillamook would fall if the same criteria were used for fiscal 1984.

Our region and all 14 coastal ports are vital links in our water transportation system. Enormous sums of revenue are realized by the Federal Government in delivering both lumber, plywood, paper, and logs to both the domestic and foreign markets. Water transportation is by far the most cost-saving and energy-efficient method of delivering these products derived mainly from Federal timberlands. The shocking situation of our local economy due to outside influences beyond our control threatens the well-being of every citizen living in the coastal region.

Our citizens have always been hard-working people contributing to the national welfare of our Nation. If in one fell swoop, our link with the sea is cut off by hasty, ill-conceived action, then we will indeed become a welfare drain on the national budget.

We respectfully ask that you study carefully the attached, supporting data spelling out the consequences of proposed dredging cutbacks. It is our contention that all coastal ports are vital to the rebuilding of our national economy.

LETTER FROM ERNIE DEFENBACH, SUPERINTENDENT, PORT OF GOLD BEACH, OREG.

March 23, 1982

TO: Wilbur Ternyik -- Chairman Oregon Ports Federation

FROM: Ernie Defenbach, Superintendent
Port of Gold Beach

SUBJECT: Proposed Cuts in Federal Funding of Small Port Maintenance
Dredging

BACKGROUND

At this week's Oregon Coastal Port's Federation meeting, Wilbur Bernard requested that the agency discuss Reagan administration's proposal to cut Federal funding for maintenance dredging of small ports' navigation channels. Key elements of the proposed cuts and alternative legislative proposals under current consideration by Congress are presented below.

- The Reagan administration's Office of Management and Budget is proposing cuts in the Army Corps of Engineers' 1983 budget for maintenance dredging of small ports' navigation channels. The proposal cuts \$150 million from the Corps' 1983 budget of \$690 million for this program.
- The Reagan proposal would result in a 41% billion decrease in dredging funds for the Corps' North Pacific Division, comprising the states of Oregon and Washington.
- The proposal calls for a continuation of funding for larger ports such as Astoria, Tillamook and Coos Bay. Dredging funds at smaller ports that lose the federal funding are to come from user fees, according to the Reagan plan.
- The Port of Gold Beach is included on a list of 31 ports most severely impacted by the proposal, as presented to a House Appropriations Subcommittee by the Army Corps.
- Several alternative bills have been introduced by Congressmen in the Reagan proposal cut funding for small ports' navigation channels. Two of the most significant proposals are a bill introduced by Senator Hatfield and one introduced by N.Y. Congressman Biaggi. The Hatfield bill calls for a uniform 10% tax imposed on all ships moving in or out of all U.S. ports, creating a "surcharge" to pay for the maintenance of small ports' channels. The Biaggi bill calls for a continuation of existing budget allocations.
- Oregon's Congressional delegation and representatives of the Oregon Coastal Port Federation strongly oppose the administration's proposal.

STAFF FINDINGS

The proposed termination of funding of maintenance dredging for small ports directly affects the future viability of the Port of Gold Beach and the Gold Beach area. Some of the expected effects are listed below.

- The Army Corps estimates that more than 2.7 million yards of material has been removed from the Rogue channel in recent years at a cost of \$4 to \$130,000 of this is spent on the removal of dredge material from the harbor channel. If the Reagan proposal passes, this money would have to come from user fees or other sources of local revenue.
- Estimates indicate that, without maintenance dredging, the Rogue River bar will probably shoal from current depths of about fourteen feet to a depth of about two feet in possibly one year.
- Corps officials and Port representatives have expressed concern that the effects of such shoaling will be devastating to commercial fishing and sport fishing.
- Port officials believe that the termination of maintenance dredging would likely make the channel impassable to major ~~commercial~~ traffic. This commerce would directly or indirectly affect approximately 1,420,000 people if dredge funding ceased.

- Port of Gold Beach representatives have voiced concerns, that if the channel shoals to predicted levels, the resultant rough bar conditions will greatly increase the hazard facing commercial and sport fishing vessels that use the Rogue entrance.

ACTION REQUESTED

Consider forwarding attached letter to Oregon's Congressional delegation.

Eric D. [unclear]

February 3, 1982

SUMMARY OF REPORT TO BOB ELLARD CORPS OF ENGINEERS IN RESPONSE TO QUESTION:

"What would be the economic impact (in terms of people served) on the PORT Of Gold Beach, if the C.O.E.'s withdrew all funding of dredging operations to your shallow draft port?" (Shallow Draft is defined as 13' or less MLLW)

Figures hurriedly compiled in the 5 hrs. allowed are as follows:

-- Number of people affected by COE funding withdrawal --

1. Jerry White Water Boats (32,000 people served)
2. Banshee Charter Boats (650 -- 700 people served)
3. Mail Boats (10,000 people served) -- 2/3 of these people are out-of-staters.
4. Morris Graves Charter (300 -- 1,000 people served)
5. Foot Traffic supplied by Chamber of Commerce 4,325 -- this figure was not accepted by COE because not directly water related to dredging.
6. Coast Guard Reports 3,000 -- 4,000 bar crossings during 1981 with 46 rescue missions out of gold beach.
7. Mr. Ellard was not interested in the economic impact on Kinchloe Cannery, nor fisherman up-stream using forestry park ramps, etc.

By using some "multiplier-bv" -- the rationale of which was undisclosed -- Mr. Ellard estimated that consistent with the above empirical facts that he would report to his superiors -- 1,420,000 to 1,209,000 people would be affected. if dredge funding ceased.

Compiled by --

E.d and L.F.

LETTER FROM JOHN M. MOHR, INTERIM OPERATIONS MANAGER, PORT OF COOS BAY, OREG.

November 24, 1961

The Honorable Bob Packwood
 Senator State of Oregon
 P.O. Box 3621
 Portland, Oregon 97207

Dear Senator Packwood:

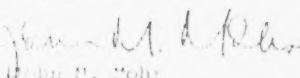
The Port of Coos Bay would like to reiterate their position in opposition to the Reagan Administration's and the House Bill's S-1692 proposal regarding user fees.

Any proposal which does not share cost reasonably among all ports would create disparity which would seriously restrict, if not eliminate, all ports that are not naturally deep draft ports.

The Port of Coos Bay while opposed to all user fees, feels that the Hatfield bill is the fairest of all the user fee proposals. Therefore, the Port of Coos Bay supports the Hatfield proposal in concept.

I would like to thank you for your past support, and we at the Port of Coos Bay are looking forward to your continued support in the future.

Sincerely,



John M. Mohr
 Interim Operations Manager

LETTER FROM PAUL L. COYNE, GENERAL MANAGER, PORT OF SIUSLAW, OREG.

Mr. William L. Ternyik, Chairman
 Oregon Coastal Ports Task Force
 Federation
 P. O. Box 1226
 Florence, Oregon 97119

Dear Chairman Ternyik:

It has been brought to our attention that on 11/21/61 the Corps of Engineers got for Oregon coastal navigational projects. This includes all projects with the exception of the Willamette and the Umpqua River.

By the Corps of Engineers own estimation, the Siuslaw River entrance will silt up to a depth of approximately 100 feet in one year. The Siuslaw River entrance is not dredged regularly during the low water period.

Western Long County, Oregon and most of the Siuslaw River watershed are conditions that are only known to the Corps of Engineers. The Port of Siuslaw is not dredged to authorized standards. The Corps of Engineers, therefore, schedule, no more ocean going tug and barge traffic, and no intercoastal traffic departing this Port of Call. Approximately 100,000 tons of cargo with a quantity will be lost to waterborne commerce, this figure is based on a study made by the Corps of Engineers. The Port's estimated loss of cargo is 100,000 tons per year, which means only the small dry bulk type cargo is being lost out of the quantity only during calm, flat sea conditions.

The Siuslaw River entrance has silted up to a depth of 100 feet in one year, it remains across the bar during each of the low water periods. The Port of Siuslaw has not been with annual dredging since 1950. The Corps of Engineers has

responsible 18.5 days of fog each year of the 1970's. The Port of Bandon has suffered eleven accidents with one loss of life during this same period.

Economically, such a proposal would be a ticket to ride for our already depressed conditions. And, the high risk for accidents both on the bar as well as in the off-shore waters will increase dramatically due to all the port commercial and recreational traffic trying to operate in marginal weather conditions.

The Port of Bandon respectfully requests that the U.S. Coast Guard be authorized to maintain average annual navigational depths of 16 feet in the Coquille River Bar. This is all of the design project for the Coquille River Bar.

LETTER FROM ALEX LINKE, MANAGER, PORT OF BANDON, OREG.

Re: Proposed Federal Port Maintenance Dredging Cuts.

Dear

The Reagan administration proposes to cut the Army Corps of Engineers "83" budget by 150 million dollars. This would eliminate maintenance dredging of shallow draft ports such as the Port of Bandon.

The Corps of Engineers estimates the Coquille River Bar would shoal to 7 feet from the present 16 feet. A shoaling of 7 feet will make it impossible to continue here. An annual 35 million board feet from local sawmills.

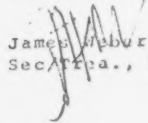
Our present fishing fleet will no longer unload their product in Bandon. Since productive fishing grounds are located directly off our facility, fishing vessels would consume extra fossil fuel and fishing time enroute to ports located further away. Trucking product from neighboring ports to Bandon processing plant would be economically unfeasible and as in the case of the sawmills would result in the loss of jobs. A 15 million dollar marina and boat works project already under construction in Prosper would be in jeopardy.

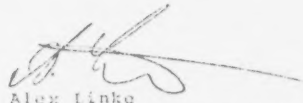
The U.S. Coast Guard will not have a Coquille River Patrol for the summer of "82". Unless the Coast Guards "83" budget is increased its probable that there will be no summer patrol in "83", this in conjunction with no maintenance dredging will in the Ports opinion increase boating incident's on the Coquille River Bar.

The Port of Bandon would like to go on record in opposing President Reagan's cuts and the Abner Bill S-1692 regarding user fees.

Sincerely;


James A. Hanna
President, Port of Bandon


James Linke
Sec. Treas., Port of Bandon


Alex Linke
Manager, Port of Bandon

LETTER FROM THOMAS E. HEDGEPEETH, COMMISSIONER, PORT OF UMPQUA, OREG.

March 22, 1982

Mr. William Karcher, Chairman
Port of Umpqua Commission
c/o Gaylord Vaughn
Reedsport Professional Bldg
Reedsport, OR 97467

Dear Mr. Karcher:

In response to your request that an assessment be made of the economic impact upon the Port District if dredging of the Umpqua River is not maintained, the following criteria and conclusion was arrived at:

Criteria:

1. Each business interviewed must have a water dependent or water related activity resulting in the need to cross the Umpqua River bar.
2. Businesses were grouped as either industrial or recreational. (Industrial group included boat repair shops, navigation co., forest products manufactures, and seafood processors.)
3. Total estimated economic loss to each group is basic income dollars lost if Umpqua River entrance is allowed to shoal to a depth of 11 feet.
4. Total economic loss to the Port District was estimated by multiplying the total basic economic losses by a multiplier of 7.

Conclusion:

Total basic dollar loss to the industrial group will be 45.21% million. Total basic dollar loss to the recreational group will be 1.110 million.

TOTAL ECONOMIC LOSS to the Port of Umpqua District will be 324.27% million.

This economic loss would have drastic effects upon the economy of the area greatly increasing unemployment in all segments within the Port District.

The cessation of maintenance dredging of the Umpqua River has the potential of destroying three fish processing plants, two boat repair and manufacturing plants, lumber barging activity, gravel barging activity and would have a serious economic effect on the importing of bunker fuel by a major wood products plant.

Without maintenance dredging, the cost of doing business for wood products producers dependent upon barging would rise dramatically. They would continue to import and export raw material and finished product by alternate means of transportation much less cost efficient. On the national level, this would add an additional 17 - 20% onto the consumers cost for such products.

Future development requiring a shallow draft harbor could not locate on the Umpqua Estuary causing future economic loss to the Port District.

A shallow river entrance causes a rough and dangerous entrance which would reduce the recreational opportunities to the Winchester Bay-Salmon Harbor Recreational Complex. This increased danger would greatly increase the U.S. Coast Guard search and rescue activities causing the expenditure of more Federal dollars.

The Port of Umpqua should join with OCZMA in pointing out that the cessation of dredging of Oregon River Entrances and upstream channels by the U.S. Corps of Engineers is not consistent with the Federal Coastal Zone Management Act of 1972. (Refer OCZMA letter to Senator Hatfield, Senator Packwood and Representatives Aucoin and Weaver, dated March 9, 1982.)

Sincerely,



Thomas E. Hedgepeth,
Port of Umpqua Commissioner

LETTER FROM DONALD G. MANN, MANAGER, PORT OF BROOKINGS, OREG.

March 25, 1982

Mr. Wilbur Ternkik, President
Oregon Coastal Ports Federation
c/o Paul Coyne, Port Manager
Port of Siuslaw
Box 1220
Florence, Oregon 97439

Dear Mr. Ternkik:

In response to your request regarding the economic impact on the Port district of the Port of Brookings if dredging of the Chetco River is not maintained.

Many businesses were interviewed in regards to this situation and each business is directly water related or has activity that results in the need to cross the Chetco River bar.

Without maintenance dredging, the economic effect on our community would be devastating. With the present increase of unemployment, these types of proposals are unreasonable. Jobs need to be created not eliminated.

The elimination of maintenance dredging on the Chetco River has the potential of destroying our lumber barging activities, eliminating four (4) fish buying companies and the possibility of unemployment over four hundred (400) commercial fishermen.

In 1975, an estimated two (2) million dollars was invested in the new commercial boat basin here in Brookings. This was a federally funded project. This major improvement was undertaken on the assumption that maintenance dredging would be continued. It seems now that the same hand that put the shoe on, is now trying to cut off the foot. This is absurd!

Investments of this type stand to lose financially if adequate channels are not maintained in the future. In addition, the port districts will suffer as revenues, generated from moorage receipts, port land, building rentals, dock fees and fuel sales will decline drastically.

To the extent that maintenance dredging stimulates the fishing, timber and tourist recreation industries, these, in turn benefit the retail trade and services sector of our economy. The major stimulating influence to this sector of the economy comes from the increased tourist activity using our sport marina and other facilities at our port which are made possible by annual maintenance dredging.

To add, the Port of Brookings as well as many other coastal ports, is a port of refuge. Fishermen, commercial as well as recreational, receive a direct benefit from adequately maintained channels. During foul weather, vessels at sea must seek protection from the dangers of storms and inclement weather. Without maintenance dredging, the distance to safe ports of refuge would be lengthened and the chance for the loss of life and property would be greatly increased!

To conclude, the total economic loss to each business is basic income dollars lost if the Chetco River entrance does not receive annual maintenance dredging.

Sincerely,
PORT OF BROOKINGS

Donald G. Mann
Donald G. Mann, Manager

Leroy Wright
Leroy Wright, Chairman

Russ Myers
Russ Myers, Vice Chairman

Nesley Kellom
Nesley Kellom, Treasurer

unavailable
Keith Wilkenson

LETTER FROM JAY L. RASMUSSEN, EXECUTIVE DIRECTOR, OREGON COASTAL ZONE
MANAGEMENT ASSOCIATION, INC.

March 10, 1982

Mr. Jim Ross, Director
Oregon Department of Land Conservation & Development
1175 Court Street, N.E.
Salem, Oregon 97310

RE: CONSISTENCY AND PROPOSED MAINTENANCE DREDGING REDUCTIONS

Dear Jim:

As you are aware, the Reagan Administration has proposed a reduction of \$150 million in fiscal year 1983 for dredging operations which, in Oregon, will cause the cessation of dredging of most of our river entrances and upstream channels by the U.S. Army Corps of Engineers.

The Corps has established estimated changes in bar depths within several years of the dredging cessation. For example, the Yaquina channel entrance depth would be reduced from 40 feet as authorized to 17 feet; the Umpqua bar from 26 feet as maintained to 14 feet; the Siuslaw from 18 feet to 5 feet; and the Rogue from 13 feet to 2 feet.

Under Oregon's approved Coastal Management Program (OCMP) and federal law (15 CFR 930.33(b)), all federal development projects in the Coastal Zone are to be reviewed to determine if they are significantly affecting the coastal zone wherein "significantly affecting" is defined as actions or activities that would "cause significant (1) changes in the manner in which land, water or other coastal zone natural resources are used; (2) limitations on the range of uses of coastal zone natural resources; or (3) changes in the quality of coastal zone natural resources."

Furthermore, the OCMP includes in its listing of the kinds of activities as directly affecting the coastal zone as "dredge, fill, development or construction in all coastal waters". In this respect, a solid case may be developed for requiring a consistency review of the suspension of maintenance dredging in many of Oregon's shallow-draft and deep-draft estuaries. In the wake of millions of dollars expended at every level to provide either shallow or deep-draft capabilities---including jetty construction and aids to navigation---it would appear that suspension of dredging would significantly affect our coastal zone. Our coastal ports, commercial and sports fishermen and boaters have a significant investment in the continuance of ocean entry. To establish Yaquina Bay as deep-draft under the OCMP and administrative rules and then, by federal action reduce the capabilities to shallow-draft seems a clear violation of the intent to have local-state and federal consistency in actions. Similarly, to reduce the Siuslaw estuary from shallow-draft to conservation is but another example and there would be a number of these types of shallow-draft to conservation de facto changes. Certainly, this proposed action to suspend dredging has far wider implications than the geophysical testing by the Geological Survey of last year---an activity to which your department responded.

Jim, I would appreciate your quick review of the points contained in this letter. I believe that federal action in reducing or eliminating maintenance dredging has as much if not more impact on our coast than the restoration of several jetties or in increasing dredging requirements. Of what benefit is the CZMA in seeking urban and port redevelopment when federal activities defeat the overall objective? I am unaware of this approach to using federal consistency---that is, in questioning a federal action not

to do something in our coastal zone which they have been performing for an extended period. It does, I believe, hold some promise for highlighting the seriousness of the federal proposal and for using federal consistency on behalf of our coastal interests.

I look forward to your response.

With all best wishes,


Jay L. Rasmussen, Executive Director
OREGON COASTAL ZONE MANAGEMENT ASSOCIATION, INC.

LETTER FROM JOE JAKOVAC, COOS-CURRY COUNCIL OF GOVERNMENTS

March 11, 1982

Wilbur Ternyik
Port of Siuslaw
P.O. Box 1220
Florence, Or. 97439

Dear Mr. Ternyik:

As you know, proposed reductions in the U.S. Coast Guard and Army Corps of Engineers budgets may have disastrous consequences for the coastal areas which depend on these two federal agencies for economic activity and public safety. While the true extent of the proposed reductions is still unclear, it is obvious that major efforts will be required to protect the integrity of coastal ports and the economic and recreational livelihoods which the coastal ports support.

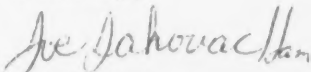
The Coos-Curry Council of Governments has formed a "Red Flag Committee" which has as its charge the mobilizing of effort to work with our State and National leaders to protect the integrity of our coastal ports. The "Red Flag Committee" members are Joe Jakovac (Port of Coos Bay), Bill Tankersley (Oregon Marine Board and Curry County resident), Jim Hanna (Port of Bandon), and Bob Pittam (Coos County community leader and former member of the Oregon Economic Development Commission). The Committee is currently defining the problems, consulting with contact persons, and developing an action strategy.

The purpose of this letter is to introduce you to the "Red Flag Committee" and its purposes. We hope we will be able to work with you as we define specific actions and that you will consider us as a resource to you in the effort to protect the viability of the coastal ports and the coastal economy.

Thank you for the opportunity to acquaint you with our purpose. We look forward to working with you in the near future.

Please feel free to direct inquiries and information to the Coos-Curry Council of Governments' Director Sandy Diedrich.

Sincerely,


Joe Jakovac
Red Flag Committee Chairman

ROGUE RIVER BASIN, OREGON

STATEMENT OF ANNE BASKER, DIRECTOR AND MEMBER OF THE
EXECUTIVE COMMITTEE, ROGUE BASIN FLOOD CONTROL AND
WATER RESOURCES ASSOCIATION

Chairman HATFIELD. Now, I would like to invite the Rogue Basin Flood Control and Water Resources Association to come forward—Anne Basker, director and member of the executive committee.

Ms. BASKER. Thank you, Senator.

Chairman HATFIELD. Nice to see you, I never know what hat you are going to be wearing.

Ms. BASKER. Today I am concerned with Rogue basin. I will see you another day about some other things.

Chairman HATFIELD. I am sure you will.

Ms. BASKER. You have our prepared testimony. I don't have to tell you that Applegate Lake is complete since you were at the dedication last May.

ELK CREEK DAM, OREG.

I would refer you, however, in our request, to the second item on the second page concerning the flood control benefits that would have accrued had Elk Creek Dam been in place in December when we had another flood in the Rogue basin, particularly in the Grant's Pass area which, as you know, is the area that would most benefit from the flood control measures that Elk Creek Dam will provide.

And the second paragraph of this testimony indicates that, had the Elk Creek Dam been in place, the flow in the Rogue River could have been cut another 6,500 cubic feet per second which would have amounted to 48.9 percent of the reduction of the upper Rogue and that kind of thing would have cut the flooding by 3 feet, had it been the major kind of flood we had in 1964.

FLOODING HISTORY

I will just repeat the same thing I said this morning. In 1955, I moved with four children under 3, the youngest of whom was a baby girl, because we were flooded out. In 1964, we had another flood and I had a houseful of people who were flooded out. In 1974, as the county commissioner, chairman of the board, I was given the dubious honor of declaring the county a disaster area because of flooding in January 1974.

I am very concerned that 20 years later the baby girl at 25 is a practicing attorney in Portland, and we still don't have a dam to control the flooding in Josephine County, a serious kind of concern, and we understand budgetary constraints, but we are making the request and hope it can remain in the budget.

Chairman HATFIELD. Thank you very much.

Ms. Basker, this has probably been the most controversial of all the projects in the State, or one of the most controversial.

I think that you are right. We now have, I believe, a complete go-ahead from the State Water Board and the Governor; is that correct?

Ms. BASKER. Exactly.

Chairman HATFIELD. The State has endorsed this project.

Ms. BASKER. This morning I submitted copies of correspondence which came from the Governor's office both to you and to Congressman Bevell indicating total support for the Rogue basin project.

Chairman HATFIELD. As you know, we had \$1.3 million in the fiscal year 1982 budget to update the engineering and design; and to study the potential of hydropower at the Elk Creek project. That report is not yet completed, or will be later this year. It is a very general timeframe and unrelated to your time frame.

We also have, I believe, as you are aware, Congressman Weaver, who represents you from the Fourth District.

Ms. BASKER. He represents the Fourth District, sir.

FINDINGS OF GAO REPORT

Chairman HATFIELD. The GAO did a review of this project and came up with somewhat of a critical report. Could you comment on that report? We are having it reviewed and I think when GAO or any other agency or citizen group comes up with a report, we should take the opportunity to pay careful attention to those reports.

Would you care to comment on your evaluation of their findings?

Ms. BASKER. I can only comment that I have not seen the entire report. I'm aware of some of the questions that have been raised.

My reaction, again, is that the Congress intended in 1962, at the time the project was authorized, that this be a single project with three parts, and actually none of those would stand on their own terms of cost benefit if they were entered as single items.

As a total comprehensive project, the cost-benefit analysis is, I think, completely defensible.

Chairman HATFIELD. This issue has been raised by other groups, as you know. I think more from the standpoint of trying to block the project, perhaps, than any other reason. I think you stated the history very clearly—this was a unified project that at no time initially did they ever expect any one of the units to stand on its own, but rather the three combined together as three different stages of a flood control system met the cost-benefit ratio and all of the other tests critical to the analysis and evaluation of any water project.

I want you to know I strongly oppose this attempt to change the whole configuration of flood control in the Rogue basin, particularly since it is after the fact, after the project has been initiated and the rules have been established and the commitment has been made.

It is to me a poor-loser approach to a project that people may have reasons to oppose, legitimate reasons to oppose. But I do not think this tactic really can stand in light of scrutiny in terms of integrity and the clear commitments to proceeding with this project.

Now, I am willing to listen to any evidence to the contrary. I want you to know that is certainly my perspective. I kept this project alive as

much as I could—on the back burner. We could provide money to resume construction in fiscal year 1983 after we have an opportunity to review the GAO report and any other reports we have related to the turbidity or other impacts. We have disproven those allegations which were based on scientific data, those have been refuted at the time when there was a political uncertainty about the State's position. That uncertainty has now been eliminated.

LOCAL PROJECT SUPPORT

And we have been through referendums, I believe, to determine local support. What is your assessment of that local support at this particular time?

Ms. BASKER. I think it is very strong.

If I can back up again just for a moment. The flood control benefits to Josephine County come primarily from this project. Josephine County has been in total support of this project since the beginning of the organization and its first request for funding.

I am so grateful for your comments. Interrupting the procedure at this point leaves us with an overbuilt fish hatchery, for example, because it was designed to take care of the needs of the three areas. It leaves us in Grants Pass with a major public facility built in the flood plain if we don't follow the original planning. So that is a matter of great interest, great concern to the residents, most particularly of Josephine County, but of the whole area because, as you know, our membership includes organizations from Jackson, Josephine, and Curry Counties. I think the support is very wide and the project is very popularly accepted. But like any public works project, there will be some opposition and I cannot speak for the entire world when I say that to the best of my knowledge the major population, the majority of the population in the area, is very supportive of the project.

PROJECT AUTHORIZATION

Chairman HATFIELD. Isn't the bottom line, historically, the Flood Control Act of 1962 which clearly, unequivocally stated Elk Creek Dam was one part of the three-dam system?

Ms. BASKER. Exactly. And if we are looking for justification in terms of employment, for your information, as of February 1981, our unemployment in Jackson County was 16.3 percent, and in Josephine County, 15.8 percent. We are hurting right now and any help would be much appreciated.

Chairman HATFIELD. Thank you very much.

Ms. BASKER. Thank you so much, Senator.

[The statement follows:]

STATEMENT OF ANNE BASKET, DIRECTOR, EXECUTIVE COMMITTEE, ROGUE BASIN FLOOD
CONTROL AND WATER RESOURCES ASSOCIATION

We thank you for the opportunity to appear before this committee in support of funds for the Rogue River Basin projects in Oregon for fiscal year 1983.

<u>BUDGETED:</u>	F.Y. '82	F.Y. '83
Corps of Engineers		
Applegate Project	\$3,500,000	Dedicated May, 1981
Elk Creek Project	\$1,300,000	
Requested for major construction contracts		\$20,000,000
Bureau of Reclamation		
Feasibility Investigation		
Grants Pass Division	\$110,000	\$ 100,000
Medford Division		
Reformulation	\$ 10,000	\$ 5,000

The Congressional authorization in 1962 under PLS 7-874 provided three multi-purpose flood control dams. Twenty years later, two of the three dams have been completed. Lost Creek, on the main stream of the Rogue, was dedicated in June 1977 and Applegate dam on the Applegate River was dedicated May 27, 1981. Elk Creek project was placed on hold in 1975 because of public concern of turbidity and water quality. These have been resolved, and the Oregon State Water Policy Review Board voted on April 4, 1981 to support the project again.

The Corps has purchased the land for the reservoir, built a bypass road around the dam site and stockpiled a substantial amount of gravel for the project. \$8,964,000 in funds was expended through 1981. The Public works bill signed by President Reagan in December 1981 included \$1,300,000 for Elk Creek project. These funds are being used to re-design the project for possible minimum power facilities and the feasibility of utilizing a roller-compacted concrete dam as an alternate to the earthfilled embankment. The Heppner, Oregon Flood Control dam is being built with the new process, which we understand is substantially less costly.

Funding for the Elk Creek construction is vital for maximizing the authorized project benefits for the Rogue River Basin. These benefits can best be stated from the summer drought in 1981, and the minor flood December 19, 1981.

1. The rainfall for the 1981 agriculture year, which ends on August 31, was 61.86 of normal at the Medford Weather Station. The precipitation was 12.76 inches versus the normal of 20.64 inches. New policies by the Bureau of Reclamation provided 140 water right users to contract for 2504 acre feet of supplemental water along the Applegate and Rogue River. This additional water improved and saved crops on 2807 acres in the Basin.
2. The Portland District Corps of Engineers estimated a \$5.3 million savings in flood damage from the December 19, 1981 storm. The Applegate Basin was \$2.8 million and the Rogue River was \$2.5 million.

Flow comparisons with the major storm in 1964 graphically show the need for the Elk Creek Project.

Rogue River flows	1964	1981	% of '64
Lost Creek inflow	25,000 cfs	11,400 cfs	45.6 %
Dodge Bridge	87,600 cfs	24,600 cfs	28.1 %
Grants Pass	152,000 cfs	78,900 cfs	51.9 %
Elk Creek to Rogue	19,200 cfs	6,720 cfs	35.0 %

The discharge from Lost Creek Dam was cut to 200 cfs, which reduced the Rogue flow by 13,300 cfs. If the Elk Creek dam was in place, the flow in the Rogue could have been cut another 6,500 cfs or 48.9 % of the reduction on the upper Rogue. This would have reduced the flow at Grants Pass another foot. So, a storm of the 1964 magnitude with Elk Creek benefits could reduce the flood stage by nearly three feet.

3. Economic factors support full funding of the Elk Creek project.
 - a. Adequate funding of the Applegate project allowed completion one year ahead of schedule and saved over \$12 million dollars in construction costs.
 - b. Contractors are more competitive in todays market.
 - c. Unemployment in Jackson County in February was 16.3% of the labor force of 65,090 - and in Josephine County it was 15.8% of the labor force of 23,400.

Thank you for your continued support for the Rogue River Basin.

Rogue River Project Pertinent Data

Feature	Unit	Lost Creek	Elk Creek	Applegate
Stream		Rogue River	Elk Creek	Applegate River
County, State		Jackson, Oregon	Jackson, Oregon	Jackson, Oregon
Dam location		Sec 26, 27 & 34 T33S, R1E, WM	Sec 19, 20, 29 & 30 T33S, R1E, WM	Sec 25 T40S, R4W, WM
River mile above mouth	mile	153.6	1.7	45.7
Drainage area	sq mi	674	132	223
Airline distance from Medford	mile	26 north	26.5 north	23.0 southwest
Airline distance from Portland	mile	205 south	205 south	255 south
Usable storage	acre-feet	315,000	95,000	75,000
Inactive storage	acre-feet	120,000	5,750	6,990
Dead storage	acre-feet	30,000	250	10
Total storage	acre-feet	465,000	101,000	82,000
Elevation-maximum (full) pool	feet, msl	1,872	1,726	1,987
Elevation-minimum flood control pool	feet, msl	1,812	1,665	1,889
Elevation-minimum conservation pool	feet, msl	1,751	1,581	1,854
Area - maximum pool	acre	3,430	1,290	988
Area - maximum flood control pool	acre	2,580	710	360
Area - minimum conservation pool	acre	1,820	200	205
Length - reservoir	mile	10	6.2	4.6
Elevation - top of dam	feet, msl	1,882	1,733	1,994
Length of dam	feet	3,750	2,685 (2,575)*	1,300
Maximum height-riverbed to top of dam	feet	327	233	242
Embankment volume	cu yds	10,800,000	4,300,000 (100,000)*	3,000,000
Concrete volume	cu yds	110,000	63,000 (1,158,000)*	86,000
Spillway control gates (flamter)	number	3	2	2
Spillway design discharge	c.f.s.	158,000	57,900	93,800
Outlet works		Multiple-use Intake Tower, Outlet Tunnel, Flip Bucket	Multiple-use Intake Tower, Cut & Cover Outlet Conduit, Flip Bucket	Multiple-use Intake Tower, Cut & Cover Outlet Conduit, Flip Bucket
Outlet capacity at maximum & full pool	c.f.s.	11,500	6,000	6,100
Outlet slide gates (oper & emerg) number	(sets)	2	2	2
Outlet temperature control (various elevations)		Multiple level intake	Multiple level intake	Multiple level intake
Power	kW	49,000	None	None
Project cost (estimate)		\$135,863,000	\$120,000,000	\$91,181,000
Cost to Date (30 Sep. 1981)		\$135,254,000	\$8,987,000	\$87,644,000

*Roller compacted concrete dam being studied in lieu of embankment dam.
Estimated savings about \$13,000,000.

PACIFIC NORTHWEST WATER RESOURCE PROJECTS

STATEMENT OF STEPHEN LINDSTROM, EXECUTIVE VICE PRESIDENT, PACIFIC NORTHWEST WATERWAY ASSOCIATION

Chairman HATFIELD. Let me invite the Pacific Northwest Waterways Association, Mr. Steve Lindstrom, executive vice president.

Good afternoon, welcome.

Mr. LINDSTROM. Good afternoon. Thank you very much for the opportunity to appear before you today.

As you know, we have been coming to this fair city for 48 years as an organization supporting projects and activities of interest to us in the Northwest region and recently have included Alaska in our field of membership and interest.

I would like to summarize my statement, if I might, spend 2 or 3 minutes taking the highlights from it.

Before I do, I would be remiss to fail to thank you and those that work with you for the concerns and support, not just for your home State, but for all of the activities in the region that fall in the purview of this committee. It has been a valuable and productive partnership which I hope will continue into the future.

Our requests this year are modest. Along with the need for a new lock at Bonneville Dam, two other conspicuous goals of our organization are continued appropriate level of relief from the impacts of Mount St. Helens' eruption and a scrutiny and screening of the needs of the Federal establishment in our region. Only the most pressing are set forth in our testimony.

Very briefly looking at the Bureau of Reclamation—

MOUNT ST. HELENS ACTIVITIES

Chairman HATFIELD. May I interrupt before you leave Mount St. Helens? As you know, there is no funding in this fiscal year 1983 budget for emergency work that was requested for Mount St. Helens.

Can you give us any information on the impact of the recent eruption there as far as damage of the structures on the Toutle River? I had some photographs at one time, even before the last eruption, which indicated a major break in that structure. And in your view, is there need for additional funding to dredge the channel in the Columbia River due to the last eruption?

Mr. LINDSTROM. Yes, sir; I do have a comment on that. I have talked this week with the Corps people in Portland, both division and district representatives, and they have not quite finished the survey as a result of the damages caused on March 19 and subsequent days after that eruption.

Just a note aside, one of the problems they are having is that the Corps agreed that USGS would conduct a major portion of that survey and that is kind of a shift of gears and it has taken a bit longer than it would have if the Corps had done it internally.

I am not criticizing that; I am saying we do not have all that information yet today.

The upshot of the survey is that debris retention structures did do their job after that March 19 eruption, they contained several million yards of silt and other debris that would have gone down into the Toutle and Cowlitz Rivers.

However, especially on the North Fork of the Toutle, the structure suffered considerable damage and are now in need of repair anticipating future catastrophic activity. They would not be able to do as good a job as they did this time.

Chairman HATFIELD. Why then, the necessity of having to go into some kind of what I understand to be a rather detailed extended study on repairing the break in that structure? Do we have to go through some engineering feasibility study on plugging up the hole?

Mr. LINDSTROM. No, sir. It is our opinion that all we need to do, in the public arena, is to get from the Corps of Engineers the three or four optional packages that could be taken to solve the problem.

Chairman HATFIELD. That is long term.

Mr. LINDSTROM. It might also serve short term. For example, right now in this discussion if we look at an emergency appropriation or supplemental for 1982 or moneys normally appropriated for fiscal 1983, we might say the first option is to raise the existing debris retention structure, repair them at their base level, raise them a number of feet so you have more retaining capacity behind them.

The second alternative might be to harden the existing structure and scoop out from behind them, and the third might be on a rough look, to say maybe we are better off to build something new downstream, to abandon that facility and let the debris come across and build a new catch basin in an area not loaded up and prevent movement of that material.

Chairman HATFIELD. What are they doing about the breach?

Mr. LINDSTROM. They are doing nothing about the breach. It is sitting there, it is exposed, in a vulnerable situation. That is why the timing of this survey is important.

Chairman HATFIELD. When I asked the Corps about the present breach, I got the impression—and I will go back and reread the record—but I got an impression there was some kind of study that had to be launched in order to determine how to handle the breach. This is what puzzles me as a layman, how much of a study do we have to have to know that if there is a breach in an existing structure of that kind, there isn't already some knowledge in how to go back repairing it.

Mr. LINDSTROM. The impression that I have, Senator, is that the only study they are going to have today is not on how to repair the break, but whether or not repairing the breach is the cost-effective and timely way to go as compared to scooping out behind or building something new or doing some other structural alternative.

Chairman HATFIELD. Tying the breach is not a matter of how to repair it, you are telling me, but rather how does it fit into a long-term solution.

Mr. LINDSTROM. Or a medium-term solution.

Chairman HATFIELD. Or intermediate-term solution.

Mr. LINDSTROM. Yes. That I think is why the Corps is a little wary now that they don't see the unanimity among the Federal agencies that existed in the original crisis. I think they are a little wary to move without reinforcing their opinions a little bit.

Chairman HATFIELD. Well, personally, I think it is a tactic used by OMB to delay expenditure of money for emergency repair by calling for a study, because the money for the emergency repair which deals specifically with the breach has been forestalled at OMB on the basis that we need a study.

It may have been a sound engineering principle to do it, but I think that they are trying to stall the possibility of required authorization for a long-term solution. You and I are talking about a short-term and intermediate period of time solution, but I just have a sneaky suspicion if we dig down to the bottom of this, that is why I asked the question, to see if you could shed any light on it, the Corps comes up here and it has to represent the administration's policy—an administration that has filtered this original request through the OMB machinery. Sometimes we can extract from those witnesses what their original requests were before they were sanitized and filtered through the OMB process.

Mr. LINDSTROM. That is the trickle-up theory, sir, of Government. [Laughter.]

Chairman HATFIELD. We may have more of this gunk in that process than they have behind the structure that is holding it out of the Columbia River. [Laughter.]

Mr. LINDSTROM. We may indeed.

I think we can draw a rough parallel between that particular tactical approach rather than engineering approach to one solution of the problems by looking at the recent activities surrounding the study of the Bonneville lock. That went back to OMB and it went back for a look at nonstructural alternatives, which was nothing but a delaying tactic.

Chairman HATFIELD. That was the previous administration.

Mr. LINDSTROM. But very parallel use of OMB as, shall we call it—

Chairman HATFIELD. This is a very bipartisan tactic then.

Mr. LINDSTROM. It appears that the delay can be bipartisan.

COLUMBIA RIVER DREDGING

To comment on part of your question about the Columbia River's need for dredging for deep draft navigation, their currently is additional dredging proceeding at the mouth of the Cowlitz River, about a 1.8 million to 2.2 million yard activity beginning at the catch basin that has worked very well in the last year and a half.

The current status of the navigation channel is pretty good; however, it is going to have to be monitored closely as additional silt, et cetera, comes down off the Toutle and Cowlitz watershed.

Currently there is no situation that could be called a crisis. It is a long-term thing and part of something that the Corps, I hope, will be able to address over a period of years.

If I might continue, and since we did focus really tight on Mount St. Helens, I will reduce even more the amount of comments I want to speak to you. I want to note that we do support the budget request for the Bureau of Reclamation with the caveat that if non-Federal activities can produce power and Federal structures, we would like to see that opportunity provided if it is a more timely and a more cost-effective process, and we don't want to just blindly support a budget that either it will be Federal built or else, that is not in our line of thinking.

BPA—PAYMENTS TO TREASURY

I would note our support for the Bonneville Power Administration budget, which is theoretically self-financing but requires your review and approval. We want to note what we consider a serious problem and that is the shortfall by BPA and its payments to Federal Treasury. We are confident that they will catch up by the mid- to late-eighties now that they have more flexibility in their rate structure and the rate base, I doubt there will be decreases in the Northwest for a long time. We do feel that it is important that the Northwest solve its own energy crisis.

We don't feel there is an additional Federal role to be played. Frankly, we are wary that if those people crying for Federal bailout of the electric energy problems in the Northwest, that we will end up with a national electric rate which would, to those of us in the Northwest, take rates that are now tripling and maybe double that. That is something that some of the more emotional persons involved in this discussion have failed to recognize, but we did want to make that note.

REDUCTION IN NATIONWIDE O&M FUNDING

Third, I want to speak briefly to the Corps of Engineers budget, especially the part that was addressed earlier in your testimony today.

Nearly as alarming, and certainly as unexpected as volcanic activity, is the administration's proposal to cut \$150 million nationwide from the Corps of Engineers' O&M budget. About \$12 million of that impact falls directly in our Pacific Northwest and Alaska region. Imposition of those cuts will be intolerable, eliminating 20 navigation projects as described by previous speakers and specifically described in the appendix to our testimony.

PNWA insist that Congress restore these moneys so that normal economic activity is not immediately throttled on the affected projects and in their so dependent communities.

We also urge that you continue to maintain a thread of continuity in water resource development in our region, specifically to continue planning for the new lock at Bonneville Dam; the study at the mouth of the Columbia River; and the small number of projects detailed in our attached testimony.

NEW CONSTRUCTION STARTS

We are disappointed by the absence of new starts, but we do understand the fiscal constraints under which you are operating. We sympathize with them. We do ask you keep in mind our recent testimony and

personal discussion as well as balancing fiscal constraint with regulatory reform, which can help non-Federal interests share the burden and the opportunities in the field of energy and water resources development.

In closing, I would like to make two comments that are not particularly germane to this subcommittee, but a part of your larger responsibilities on the full committee, and that is to look closely at and consider supporting additional funding for the Coast Guard, which provides such essential services in the Northwest region and then, finally, to note our displeasure with the existing proposal by the administration for new port and waterway taxes.

The proposals, as they now stand, are ill-advised, inequitable, and counterproductive to very much of what even a true conservative Government would condone. We understand there is considerable movement in that arena, especially under the leadership of yourself, Mr. Chairman.

We will look forward to seeing how the new set of discussions points might shake out with an eye toward fully supporting some form of paying our share but it certainly won't be in the form that the administration has proposed.

With that, I will close by saying we very much appreciate your assistance and hope that you will approve our endorsements and requests, that we stand ready to provide any additional information or support you might desire.

Thank you very much.

Chairman HATFIELD. Thank you, Mr. Lindstrom.

[The statement follows:]

STATEMENT OF STEPHEN R. LINDSTROM, EXECUTIVE VICE PRESIDENT, PACIFIC NORTHWEST
WATERWAYS ASSOCIATION

Good day, Mr. Chairman. It is truly a pleasure to sit before you today in testimony to the Subcommittee on Energy and Water Development of the Committee on Appropriations. The Pacific Northwest Waterways Association is grateful for this opportunity to express our concerns and recommendations about the Fiscal Year 1982 Supplemental Appropriations and the Fiscal Year 1983 Budget.

PNWA has been visiting Congress since 1934 on behalf of many valuable and productive federal public works and related legislation in the region comprised of Alaska, Idaho, Montana, Oregon and Washington. Our first efforts--back when we were named the Inland Empire Waterways Association and before we merged with the Northwest Rivers & Harbors Congress--were directed toward the inclusion of a navigation lock in Bonneville Dam. Needless to say, that lock was built--and we are returning this year to ask, among other things, for continued funding of the new lock at Bonneville Dam, an urgent regional need half a century later!

Teamed with the need for the new lock at Bonneville Dam, are two other conspicuous goals of our organization: A continued appropriate level of relief from the impacts of the Mt. St. Helens eruption and a scrutiny and screening of the needs of the federal establishment in our region, with only the most pressing set forth in our testimony to you.

BUREAU OF RECLAMATION

The President's Fiscal Year 1983 budget request for the Pacific Northwest Region of the Bureau of Reclamation is \$124,900,000. State of Washington contributions and water user funds of \$3,100,000 bring the total proposed program to \$128,000,000. This compares to a Fiscal Year 1982 program of \$90,000,000.

The Pacific Northwest Waterways Association strongly supports this element of the President's budget. However, we urge that additional hydro-power production opportunities at Minadoka, Pallisades and Anderson Ranch (all in Idaho) be planned with the flexibility necessary to allow construction and operation by non-federal entities, if local sponsors are able to proceed faster than the Bureau would.

BONNEVILLE POWER ADMINISTRATION

The Fiscal Year 1983 federal budget request to Congress by the Bonneville Power Administration totals \$2,613,000,000. Although the BPA fund is self-financing under the provisions of the Federal Columbia River Transmission System Act of 1974 (PL 93-454), Congressional approval and review is necessary.

The FY 83 budget includes continued implementation of the Pacific Northwest Electric Power Planning and Conservation Act; several major construction elements; provisions for the purchase of firm replacement power; and sufficient resources to operate and maintain the other facets of the BPA program.

Specific major budget items include \$1,627,000,000 for purchase power, wheeling and exchange; \$444,100,000 for conservation and resource acquisition; \$202,000,000 for construction (including \$61.5 million for the western Montana transmission line); \$145,900,000 for interest expense on borrowing; \$14,300,000 for power management; \$85,100,000 for associated project costs; and, \$84,600,000 for operation and maintenance.

PNWA urges immediate approval of the BPA budget for FY 83. We are gravely concerned about the short-fall by BPA in its payments to the federal treasury. We are confident that with your continued support and encouragement, BPA will reverse recent history and get current with the treasury in the near future, although rate hikes by BPA of 80% are necessary to guarantee their fiscal responsibility in the near future.

U.S. ARMY CORPS OF ENGINEERS

The eruption of Mt. St. Helens on March 19, 1982 is but a reminder that we cannot predict how continuing volcanic activity will affect the Corps of Engineers activities, as well as the lives and livelihoods of many of us in the Pacific Northwest Region. The recent eruption will require an intensification of Fiscal Year 1982 efforts in cleanup activities, as well as those steps necessary to prevent catastrophic damage in case of additional eruptions. PNWA urges that you support funding to repair the damaged structures on the North Fork of the Toutle River; the necessary excavation and dredging on the Toutle and Cowlitz Rivers to assure flood protection; and, any dredging necessary to maintain the authorized deep draft channel in the Columbia River.

Specific scope of work estimates and dollar needs are forthcoming from the Corps in the next few days.

Nearly as alarming, and certainly as unexpected as volcanic activity, is the Administration's proposal to cut \$150,000,000 nation-wide from Corps of Engineers operations and maintenance budget for FY 83. \$12,000,000 of that impact falls in our Pacific Northwest and Alaska Region. Imposition of those cuts would be intolerable--eliminating 20 navigation projects, as described later in our testimony.

PNWA insists that Congress restore these monies so that normal economic activity is not immediately throttled on the affected projects and in their dependent communities.

PNWA urges that Congress continue to maintain a thread of continuity in water resources development in our region, specifically to continue planning for the new lock at Bonneville Dam; the study at the mouth of the Columbia River; and, the small number of projects detailed in the attached testimony.

PNWA is greatly disappointed by the absence of any new starts for the Corps program in the North Pacific Division for FY 83. However, we do understand the tremendous fiscal constraints under which this Congress is operating and sympathize with them. Please keep in mind our recent testimony combining fiscal constraint with regulatory reform, which can help non-federal interests share the burden and the opportunity in the fields of energy and water resource development.

SUMMARY

PNWA would appreciate your assistance and approval of our endorsements and requests. We stand ready to provide any additional information or support you might desire.

Thank you very much for the opportunity to testify.

BUDGET COMPARISONS

The Corps FY 1983 budget request to Congress totals \$243,960,000 to continue its activities in the Pacific Northwest and Alaska. The following budget comparisons for programs in the Pacific Northwest and Alaska have been furnished to us by the Corps.

<u>Appropriation Category</u>	<u>Appropriation FY 1982</u>	<u>FY 1983 Appropriation Budget Request</u>	<u>Change From FY 1982 To FY 1983</u>
GI-Studies	\$ 5,980,000	\$ 5,405,000	\$- 575,000
GI-PE/AE&D	6,593,000	3,422,000	- 3,171,000
Construction	185,288,000	120,183,000	-65,105,000
O&M	<u>108,732,000</u>	<u>114,950,000</u>	<u>+ 6,218,000</u>
Totals	\$306,593,000	\$243,960,000	\$-62,633,000

The total budget request for FY 1983 is about \$63 million less than the amount appropriated for FY 1982.

IMPACT OF BUDGET PROGRAM

PNWA has been informed by the Corps that the amounts budgeted are adequate to maintain power-on-line schedules at ongoing power producing projects. We are pleased that the funding level will maintain these power schedules. This is extremely important since the Pacific Northwest as well as the Nation faces energy shortages in the future. However, PNWA is disturbed by the lower level of funding for certain other appropriation categories and the absence of funding for specific O&M projects.

FISCAL YEAR 1982 ADDITIONS

PNWA is appreciative of the foresight of the Congress in providing funds in FY 1982 for one new GI study start and one new planning and engineering start, and in adding funds to the FY 1982 Appropriations Bill for one new planning and engineering start, one planning and engineering resumption, one advance engineering design resumption, and two construction resumptions, all in the North Pacific Division.

NEW STARTS

The PNWA is greatly disappointed by the absence of any new study, continued planning and engineering, advance engineering and design, and construction starts in the budget request for the Corps of Engineers program in the Pacific Northwest and Alaska for FY 1983. The restrictions on new study, CP&E, and AE&D starts combined with constrained funding levels of these programs will have a serious impact on the future economic growth and welfare in this region. We are also concerned with the absence of any new starts in the construction category. We feel strongly that the level of funding of this important program will have a significant impact on the immediate employment, energy, and water supply of the region. PNWA believes that new study, CP&E, AE&D, and construction starts involving hydroelectric power and navigation should rank high in the budget program for the Corps and other Federal agencies.

OPERATION AND MAINTENANCE

The Administration has proposed significant reductions in the Operation and Maintenance budget of the Corps of Engineers. In the Pacific Northwest and Alaska, 20 navigation projects have been eliminated from the maintenance program and two others have been reduced. These budgetary reductions will cause severe hardships to the communities and cities dropped from the O&M program in the State of Alaska and in the Pacific Northwest. Typical examples of projects eliminated or reduced are as follows:

The Dillingham Harbor in Alaska will be totally unusable in 1 year. Without a usable harbor, the fishing industry would collapse. An estimated 85% of the total city work force would become unemployed.

The reduction at the Lake Washington Ship Canal in the State of Washington would cause the closure of the project except for the operation of the fish passage facility and facilities necessary to maintain the elevation of Lake Washington in accordance with flood control requirements. Closure of the lock would cause more than 2 million tons of commerce per year to be shipped via

other modes of transportation. Government vessels including Coast Guard and Corps would also be precluded from moving between Lake Washington and Puget Sound. Also, 87,000 recreational craft per year would not be allowed to use the lock facilities.

The elimination of funding for the maintenance of the Yaquina Bay and Harbor Project in Oregon would have a severe impact on the fishing and lumber economy of the northern Oregon coastal area. This harbor is an important harbor of refuge for commercial and recreational vessels and is the largest commercial and charter fishing and fish processing port on the north Oregon coast. The channel is used by the Port of Toledo 12 miles upstream to ship wood products and is used by the U.S. Coast Guard Station and Oregon State University Marine Science Center. The fishing industry and large protected bay are directly tied to the popular tourist area of Yaquina Bay and Harbor. Failure to dredge the channel would close down fish processing plants which would force fishermen to move or travel so far that the additional cost would be prohibitive. Lumber products would have to be shipped by rail or truck which would make costs too high to be competitive.

MOUNT ST. HELENS

The Corps has informed PNWA that the emergency phase of the Mount St. Helens work has been completed and that the current year program, FY 1982, will provide for only the removal of sediments at the Mouth of the Cowlitz and from the Columbia navigation channel. The program will also include monitoring work on the Cowlitz and Toutle Rivers. The FY 1983 program will include the dredging of some of the Mount St. Helens infill in the Columbia River main channel, the monitoring program in the Cowlitz and Toutle Rivers, and the initiation of a reconnaissance study of the Cowlitz River Basin. No funds are included for excavation and dredging work in the Toutle and Cowlitz. PNWA has been informed that infill in the Cowlitz River will total some 13 million cubic yards in FY 1983, which will raise the channel bottom by about 7 feet, not counting infill resulting from the March 19, 1982 eruption. This will significantly reduce the current level of 500-year flood protection for the Cowlitz area to approximately a 100-year level. This association strongly recommends that sufficient emergency funds be provided to the Corps for the Toutle and Cowlitz work to maintain the current level of protection to the people in this area. PNWA further recommends that necessary funds be provided

in the Corps Operation and Maintenance program to maintain the vital Columbia River navigation channel.

SMALL PROJECTS PROGRAM

The administration budget for FY 1983 for the Small Projects Program of the Corps of Engineers is at a minimum level. Under this program, the Corps is able to respond quickly and efficiently on projects of less than \$2 million to meet emergency situations and to cooperate with local groups in needed public works without having to follow the long and costly authorization process.

The low level funding for small projects in the FY 1983 budget will curtail the ability of the Corps to respond to local requests where cost-sharing is available in most instances, and will also curtail the ability of the Corps to work with members of the Congress in meeting local requests.

The Pacific Northwest Waterways Association strongly urges that funds for the small projects program of the Corps be provided in an amount to meet the critical needs of the regions.

WATER SITUATION IN THE PACIFIC NORTHWEST

In contrast with a number of recent years, this year is turning out to be one marked with abundant water supply. The 1981-82 winter season has seen several significant storms, two of which have produced major flooding in the Pacific Northwest. These storms have also laid down a larger than normal snowpack in the Rocky Mountains that we will see as runoff this spring. Based on measurements of snow and precipitation, runoff is forecasted to exceed 120% of normal. The high winter streamflow and relatively light power loads have resulted in high reservoir levels for this time of year, and reservoirs are currently being lowered to provide flood control space prior to the spring flood. The combination of adequate reservoir storage and expected abundant runoff should result in a spring and summer reservoir operation in which conflicts over competing usage of water are minimized. In fact, the emphasis for regulation of reservoirs will be one of assuring that flood control objectives are met.

ADDITIONAL CAPABILITIES

At our request, the Corps has furnished a list of studies and projects for which it has reported capabilities to use additional funds above the FY 1983 budget

amounts. In addition, the Corps has furnished funding schedules for those projects which are not authorized or do not have approved capabilities. The reported capabilities are those amounts of additional funds that could be used if the study or project was considered by itself without regard to the Corps overall program, fiscal constraints, or the administration's assessment of appropriate national priorities for Federal investments. PNWA screened the many worthwhile studies and projects included in the programs for which the Corps is responsible and carefully studied the capabilities and first-year funding amounts for those studies and projects not having capabilities, and are recommending those which we consider paramount to fulfilling PNWA's goals for water and related land resource development of this region. Of the 75 studies and projects in which the Corps has reported additional approved capabilities and first-year funding amounts, along with various other projects we are specifically recommending 8. They are summarized by category below and individual writeups follow.

<u>Appropriation</u>	<u>Number of Projects</u>	<u>PNWA's Recommended Increases to the FY 1983 Budget Request</u>	<u>Study/Project</u>
General Investigations Studies	4	\$1,295,000	CR&T \$+360,000 Upper Snake R & Tribs \$+770,000 Columbia R @ Mouth N/A Columbia R Coal Export Channel \$+165,000
Continuation of Planning & Engineering Studies	2	\$2,078,000	Bonneville Navigation Lock \$+1,878,000 McNary 2nd PH \$+200,000
Construction, General	2	\$34,000,000	Snettisham \$+14,000,000 Elk Creek Lake, \$+20,000,000

In addition, funding is recommended for the following O&M items which were discussed earlier.

<u>Appropriation</u>	<u>PNWA's Recommended Increases to the FY 1983 Budget Request</u>	<u>Program/Project</u>
Operation & Maintenance	\$22,000,000	Restoration of funding for Alaska, Washington & Oregon Projects <u>1/</u>
	\$7,000,000	Columbia & Lower Willamette Rivers below Vancouver, WA & Portland, OR (Additional dredging due to Mount St. Helens activity)

1/ NPD projects included in the Administration's reduction in lieu of user fee revenues.

APPENDIXSTATEMENTS IN SUPPORT
OF

ADDITIONAL FUNDING FOR FY 1983

GENERAL INVESTIGATIONS - CONTINUING STUDIESColumbia River & Tributaries, ID, MT, OR, and WA

FY 1983 Budget Amount	\$ 1,300,000
Additional Recommended for FY 1983	\$ 360,000

The Pacific Northwest is dependent to a large extent upon the Columbia River for its power, food, and fiber through irrigation, transportation through navigation, recreation, fisheries, and to a lesser extent, municipal and industrial water supply. No other single resource in the Pacific Northwest influences the character and way of life of people in the region as much as the Columbia River and its major tributaries. The Pacific Northwest is currently energy deficient. It is only because of adequate water supplies and relatively mild winters that the region has recently avoided energy deficits. Under critical water supply conditions, the Pacific Northwest Region does not have adequate energy resources to meet all of its demands. Another major water resource related problem facing the Columbia River Basin is inadequate water supplies during periods of drought to meet all competing river uses. The development of additional storage in the basin could help at least in part to meet the growing demand for additional water supplies. The Columbia River and Tributaries Study (CR&T) is investigating potential new projects and programs to supplement the entire system and the formulation of a system plan to insure that the Columbia River and its tributaries will be operated and managed in an optimum manner and in the best public interest.

The PNWA has had a long standing interest in extending Columbia River navigation from the Tri-Cities area to Wenatchee. To fully extend navigation to the Wenatchee area would require the installation of locking facilities at the three existing dams of Rock Island, Wanapum, and Priest Rapids, and providing navigation through the unimpounded Hanford reach of the Columbia River. The first step in extending navigation to the Upper Columbia River area is providing navigation through the critical Hanford Reach of the Columbia, and PNWA understands that an additional \$360,000 could be used in FY 1983 to

initiate studies of navigation through the Hanford Reach and to expedite reports on additional energy and storage in the Columbia River Basin.

PNWA supports continuation of the Columbia River and Tributaries Study and strongly urges that funds in the amount of \$360,000 be added to the FY 1983 budget request for the Columbia River and Tributaries Study.

Upper Snake River & Tributaries, Idaho & Wyoming

FY 1983 Budget Amount	\$680,000
Additional Recommended for FY 1983	\$770,000

The Upper Snake River & Tributaries study encompasses an area extending from the headwaters of the Snake River in Wyoming down to and including the Weiser River in Idaho, a distance of about 400 miles. The watershed includes about 70,100 square miles, most of which is in southern Idaho. Water resource problems are associated with uses of surface and groundwater in the interest of flood control, water quality, hydropower, irrigation, public water supply, low-flow regulation, fish and wildlife, and recreation. In FY 1982, the Upper Snake River & Tributaries study will continue its investigation of potential new projects and programs to respond to the critical water resource needs of the region. The water resource of the Upper Snake is becoming increasingly precious as increasing diverse demands are placed on it. The harsh realities of water shortages were imposed on this region during a drought in 1977. In recognition of this, FY 1983 study funds will be used to continue Weiser River Basin and offstream storage studies, to complete the Clear Lakes low head hydropower feasibility study, and to initiate a reconnaissance investigation of a low head hydropower project on the Snake River near Heise, Idaho. The Weiser River Basin study will involve continuation of consideration of major reservoir storage on the main stem for the primary purposes of power, irrigation, and streamflow augmentation needed for downstream fisheries. The PNWA strongly recommends additional FY 1983 funds in the amount of \$770,000 to advance completion of interim studies on: Barber Dam near Boise; Weiser River Basin report; offstream storage; initiate hydropower sites on Snake River tributaries in Wyoming; Big Lost River hydropower sites; and Henrys Fork hydropower sites.

Columbia River at the Mouth, OR & WA

FY 1983 Budget Amount	\$55,000
Additional Recommended for FY 1983	No additional requirement

The Columbia River is the largest river on the Pacific Coast and extends some 1,200 miles from headwaters in British Columbia to its confluence with the Pacific Ocean near Astoria, Oregon. The existing navigation project at the mouth includes a channel 48 feet deep by 1/2 mile wide over the ocean bar, stabilized by two rubblemound jetties and a spur jetty. The 48-foot entrance channel extends into the river mouth 3 miles upstream and joins with a separately authorized 40-foot navigation channel extending 120 miles upstream to Portland, Oregon, and Vancouver, Washington. These channels provide ocean access to several ports along Lower Columbia River, handling commodities important to the region.

The ongoing Columbia River at the Mouth study will address the need to deepen the entrance channel due to the trend for deeper vessels which are experiencing increasing tidal delays in crossing the bar, and to permit full utilization of the 40-foot channel upstream. FY 1983 budgeted funds are needed to complete the final report and environmental impact statement. The PNWA strongly supports this important study and urges its early completion.

Columbia River Coal Export Channel, Astoria, OR

FY 1983 Budget Amount	\$500,000
Additional Recommended for FY 1983	\$165,000

The Columbia River, some 1,200 miles long, serves as a vital transportation link between Pacific Northwest ports and foreign producers and markets. The existing navigation project consists of an entrance channel 48 feet deep, 1/2 mile wide, which extends over the bar and 3 miles upstream where it joins with a separately authorized 40-foot channel which extends 120 miles upstream to Portland, Oregon, and Vancouver, Washington. The entrance channel is protected by two converging rubblemound jetties and a spur jetty on the north bank of the river.

Pacific rim nations are expected to import increasingly larger volumes of coal to support their economies. Large coal reserves in several Western States are located near rail transportation facilities linking these coal fields to the Columbia River. The State of Oregon and the Port of Astoria

are planning development of coal export facilities near the mouth of the Columbia River. Preliminary studies indicate that such facilities would serve vessels having drafts as much as 55 feet. The Columbia River Coal Export Channel, Astoria, Oregon, study initiated in FY 1982 will address the need for modification of the present navigation project to accomplish the larger vessels.

The PNWA understands that an additional \$165,000 could be used in FY 1983 to advance the completion of the feasibility report. The PNWA supports continuation of the Coal Export Channel Study with budgeted funds and strongly recommends provision of additional FY 1983 funds in the amount of \$165,000 to expedite completion of the report.

GENERAL INVESTIGATIONS - CONTINUATION OF PLANNING & ENGINEERING STUDIES

Bonneville Navigation Lock, Oregon and Washington

FY 1983 Budget Amount	\$1,622,000
Additional Recommended for FY 1983	\$1,878,000

This project consists of a new navigation lock at Bonneville Dam on the Oregon shore, south of the existing lock and powerhouse. The new lock chamber would have horizontal dimensions of 86 feet by 675 feet, matching the dimensions of the seven other locks on the Columbia-Snake River Navigation System. The new lock would have a depth of at least 15 feet over the lower lock sill. Both an upstream and downstream approach channel would be constructed having vertical concrete guidewalls.

Operation of the proposed navigation lock would result in faster, more efficient movement of tows and barges through Bonneville Lock. The improved lock alignment would add a measure of safety for barge tows and other water craft approaching Bonneville Lock. The Columbia-Snake River Navigation System could then be utilized to its full potential.

The Association urges Congress to expedite authorization for the construction of this project and, based on the Corps expressed capability for FY 1983, increase the current budget request by \$1,878,000 and appropriate funds totaling \$3,500,000 in FY 1983 to continue the General Design Memorandum. The increased amount would advance the completion of this project's preconstruction planning by 1 year from September 1985 to September 1984.

McNary Lock & Dam, Second Powerhouse, Oregon and Washington

FY 1983 Budget Amount	\$1,800,000
Additional Recommended for FY 1983	\$ 200,000

This project consists of modifying McNary Lock and Dam by the addition of a six-unit second powerhouse to the south end of the existing powerhouse. The units will each have a generating capability of almost 124 MW (107.5 MW name plate) for a total added capacity of 742 MW. The project will also include levee access and beautification in the Pasco-Kennewick-Richland area, relocation and improvement of visitor facilities located near the powerplant, protection of existing recreation facilities and fish and wildlife habitat on McNary Reservoir, and construction of an anadromous fish hatchery for mitigation of losses resulting from operation of the proposed project.

Early completion of the McNary Second Powerhouse will provide needed peaking capacity for the Pacific Northwest Power System to serve load requirements in the later 1980s and thereafter. Average annual power benefits from this project are estimated to be \$76,830,000.

PNWA urges Congress to expedite authorization for this project and to appropriate \$2,000,000 of funds in FY 1983 to complete preconstruction planning. The Corps has indicated an additional capability of \$200,000 above the FY 1983 budget request of \$1,800,000 which would advance the preconstruction planning completion by 3 months.

CONSTRUCTION, GENERAL --- RESUMPTION OF CONSTRUCTIONSnettisham, Unit 3, Alaska

FY 1983 Budget Amount	\$ 0
Amount Recommended for FY 1983	\$14,000,000

The existing Snettisham project is located approximately 50 miles SE of Juneau, Alaska, and consists of a 8,230-foot power tunnel and 1,400-foot penstock from Long Lake down to an underground powerhouse at tidewater. The powerhouse currently has two units of 23.35 MW each for a total of 46.7 MW.

The plan of improvement for the Snettisham Unit 3 Project consists of construction of a 6,100-foot power tunnel and a 1,590-foot penstock from Crater Lake to the existing underground powerplant, installation of one additional generating unit with a capacity of 27 MW in the powerhouse, and construction of a 5,600-foot access road to the gate structure adit near the lake.

This additional power from the 3rd unit at Snettisham will be required to meet the power needs of the Juneau power market area in the 1980s. Benefits derived from the addition of the 3rd unit, which are all power, are estimated to be \$7,597,000 annually.

Last year the Corps expressed a capability for construction and Congress responded by adding \$2,000,000 to the FY 1982 appropriation to initiate construction for the 3rd unit. This year, however, the continuation of construction for this project was not included in the budget request because the project is under review pending determination of "upfront financing by local interests." If upfront financing is not provided by local interests the PNWA strongly recommends that funds in the amount of \$14,000,000 be appropriated in FY 1983 to allow continuation of construction for this power project.

ELK CREEK LAKE, OREGON

FY 1983 Budget Amount	\$	0
Amount Recommended for FY 1983	\$20,000,000	

The Elk Creek Lake Project would be operated with the existing Lost Creek Lake Project as a two-dam system to provide flood control, water supply, fish and wildlife enhancement, water quality control, recreation, and irrigation. The Elk Creek Project would control runoff from about 132 square miles upstream of the Elk Creek site. Average annual benefits are estimated to be \$5,952,000. Last year Congress added \$1,300,000 to resume construction for Elk Creek Lake. This year, however, the continuation of construction for this project was not included in the budget request. PNWA strongly recommends that funds in the amount of at least \$20,000,000 be appropriated to allow continuation of construction for this project.

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Corps Reported Add'l Cap.
Above the Budget Amount

FY 1982
Type of Study 1/ Budget Request

Study

GENERAL INVESTIGATIONS

Continuing and Resumption Studies

Study	Type of Study	FY 1982 Budget Request	Corps Reported Add'l Cap. Above the Budget Amount
<u>GENERAL INVESTIGATIONS</u>			
<u>Continuing and Resumption Studies</u>			
Chehalis River & Tribs, WA	FDP	\$ 200,000	\$ 0
Columbia River at the Mouth, OR & WA	N	55,000	0
* Columbia River & Tribs, ID, MT, OR, WA, & WY	FDP	1,300,000	360,000
* Columbia River Coal Export Channel, Astoria, OR	N	500,000	165,000
Coquille River, OR	N	140,000	0
Mill Creek, WA	FDP	50,000	50,000
Northwest Alaska Harbors, AK	N	0	130,000
Palouse River & Tribs, ID & WA	FDP	0	50,000
Powder River & Tribs, OR	FDP	0	90,000
Puget Sound & Adjacent Waters, WA	C	470,000	190,000
Rivers & Harbors in AK	FDP	550,000	150,000
Rogue River at Gold Beach, OR	N	0	90,000
Seattle Harbor-Duwamish Waterway, WA	N & FDP	50,000	0
Small Hydroelectric Plants, AK	FDP	775,000	125,000
Snohomish River, WA	N	200,000	50,000
Southcentral Railbelt Area, AK	FDP	0	50,000
Southcentral Region, AK	N	185,000	0
* Upper Snake River & Tribs, ID & WY	FDP	680,000	770,000
Willamette River Basin, OR	C	250,000	150,000
Yakima Valley Regional Water Management, WA	FDP	0	100,000
Subtotal, Continuing and Resumption Studies		\$5,405,000	\$2,520,000

1/ FDP-Flood Damage Prevention; N-Navigation; C-Comprehensive
* PNWA's recommended increases to the budget request

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2575

Corps Reported Add'l Cap.
Above the Budget Amount

FY 1983
Type of Study 1/ Budget Request

Study _____

GENERAL INVESTIGATIONS (Continued)

Continuation of Planning and Engineering Studies

Blair and Sitcum Waterways, WA	N	\$	0	\$	460,000
Bonneville Navigation Lock, OR & WA	N		1,622,000		1,878,000 *
Chehalis River at South Aberdeen-Cosmopolis, WA	FDP		0		400,000
Little Wood River, Gooding-Shoshone, ID	FDP		0		200,000
McNary Lock & Dam, Second Powerhouse, OR & WA (Phase I)	MP		1,800,000		200,000 *
Valdez Hydropower, AK	MP		0		350,000
Yakima River at Union Gap, WA	FDP		0		230,000
Subtotal, Continuation of Planning and Engineering Studies			\$3,422,000		\$3,718,000

Type of Project 1/

Continuing and Resumptions Advance Engineering & Design

Johnson Creek, OR	FC	0	145,000
Peninsula Drainage District No. 2, OR	FC	0	290,000
Subtotal, AE&D Continuing and Resumptions		\$ 0	\$435,000
TOTAL G.I.		\$8,827,000	\$6,673,000

1/ FDP-Flood Damage Prevention; N-Navigation; MP-Multiple Purpose; FC-Flood Control

* PNWA's recommended increases to the budget request

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Project	Type of Project	FY 1983 Budget Request	Corps Reported Add'l Cap. Above the Budget Amount
<u>CONSTRUCTION, GENERAL</u>			
<u>Continuing Construction</u>			
Bonneville 2nd Powerhouse, OR & WA	MP	26,400,000	0
Chena River Lakes, AK	FC	11,300,000	6,000,000
Chief Joseph Additional Units, WA	MP	16,000,000	0
Columbia R @ the Mouth, South Jetty, OR & WA (Major Rehab)	N	460,000	0
Dvorshak Dam & Reservoir, ID	MP	2,050,000	1,275,000
John Day Lock & Dam, OR & WA	MP	3,700,000	3,300,000
Lake Washington Ship Canal, WA (Major Rehab)	N	3,000,000	0
Libby Additional Units, MT	MP	10,200,000	1,100,000
Lower Columbia River Basin Bank Protection, OR & WA	FC	2,300,000	0
Lower Granite Lock & Dam, WA	MP	2,403,000	0
Lower Snake River F&WL Comp Plan, WA, ID, & OR	MP	27,000,000	0
Mill Creek Lake, WA (Major Rehab)	FC	3,400,000	900,000
Placer Creek, ID	FC	1,170,000	0
Willamette River Basin Bank Protection, OR	FC	2,800,000	0
Willow Creek Lake, OR	FC	8,000,000	0
TOTAL CONSTRUCTION, GENERAL		\$120,183,000	\$12,575,000

1/ FC-Flood Control; N-Navigation; MP-Multiple Purpose

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PROGRAM FOR FISCAL YEAR 1983

Project/Function	Type of Project	1/	FY 1983 Budget Request	Corps Reported Add'l Cap. Above the Budget Amount
OPERATION & MAINTENANCE				
Anchorage Harbor, AK	N		1,221,000	531,000
Bonneville Lock & Dam (Lake Bonneville), OR & WA	MP		8,944,000	1,691,000
Chetco River, OR	N		0	472,000
* Columbia & Lower Willamette Rivers below Vancouver, WA, & Portland, OR	N		13,045,000	7,150,000 <u>2L</u> *
Columbia River @ Baker Bay, WA	N		0	206,000
Columbia River between Chinook, WA and head of Sand Island, WA	N		0	661,000
Columbia River between Vancouver, WA, and The Dalles, OR	N		0	100,000
Coos Bay, OR	N		503,000	700,000
Coos & Millicoma Rivers, OR	N		2,413,000	158,000
Coquille River, OR	N		0	776,000
Cougar Lake, OR	N		0	200,000
Detroit Lake, OR	MP		785,000	255,000
Dillingham Harbor, AK	MP		1,557,000	422,000
Dry Pass, AK	N		0	725,000
Ediz Hook, WA	N		0	1,130,000
Everett Harbor & Snohomish River, WA	N		40,000	800,000
Grays Harbor & Chehalis River, WA	N		80,000	3,575,000
Homer Harbor, AK	N		0	265,000
Ice Harbor Lock & Dam (Lake Sacajawea), WA	N		0	870,000
John Day Lock & Dam (Lake Umatilla), OR & WA	MP		4,345,000	1,992,000
Ketchikan Bar Point Small Boat Harbor, AK	MP		9,491,000	22,000
King Cove Harbor, AK	N		0	632,000
Lake Crockett, WA	N		0	200,000
Lake River, WA	N		0	36,000
Lake Washington Ship Canal, WA	N		0	2,313,000
Lewis River, WA	N		396,000	186,000
Little Goose Lock & Dam (Lake Bryan), WA	N		0	225,000
	MP		4,401,000	

**U.S. ARMY, CORPS OF ENGINEERS
NORTH PACIFIC DIVISION
PROGRAM FOR FISCAL YEAR 1983**

<u>Project/Function</u>	<u>Type of Project</u>	<u>1/</u>	<u>FY 1983</u>	<u>Corps Reported Add'l Cap.</u>
			<u>Budget Request</u>	<u>Above the Budget Amount</u>
OPERATION & MAINTENANCE (Continued)				
Lower Monumental Lock & Dam, WA	MP		3,747,000	140,000
McNary Lock & Dam (Lake Wallula), OR & WA	MP		11,245,000	2,617,000
Ninilchik Harbor, AK	N		0	238,000
Nome Harbor, AK	N		508,000	120,000
Port Lions Harbor, AK	N		0	1,500,000
Quillayute River, WA	N		0	4,750,000
Rogue River at Gold Beach, OR	N		0	1,315,000
Seattle Harbor, WA	N		65,000	345,000
Siuslaw River, OR	N		0	1,429,000
Skamokawa Creek, WA	N		0	41,000
Skipanon Channel, OR	N		292,000	100,000
Stikine River, AK	N		0	24,000
Swinomish Channel, WA	N		0	290,000
The Dalles Lock & Dam (Lake Celilo), WA & OR	MP		7,369,000	1,000,000
Umpqua River, OR	N		0	1,688,000
Waterway connecting Port Townsend & Oak Bay, WA	N		0	235,000
Willamette River at Willamette Falls, OR	N		430,000	374,000
Yaquina Bay & Harbor, OR	N		0	836,000
Yaquina River, OR	N		0	591,000
Remaining O&M projects with reported capabilities equal to the budget amounts	-		<u>44,073,000</u>	
TOTAL OPERATION & MAINTENANCE			\$114,950,000	\$43,926,000

1/ FC-Flood Control; N-Navigation; MP-Multiple Purpose
2/ Includes \$7,000,000 for additional dredging due to Mt. St. Helens activity & \$150,000 for pile dike repair.
 * PNWA's recommended increase to the budget only includes work due to Mt. St. Helens activity.

DEPARTMENT OF THE INTERIOR PROGRAM
for the
BUREAU OF RECLAMATION

IDAHOCONSTRUCTION PROGRAMBoise Project, Black Canyon Dam (Idaho)

Fiscal Year 1982 Appropriation.....	\$ 100,000
Fiscal Year 1983 Appropriation Request.....	\$ 750,000

Safety of Dams studies and investigations will continue.

Boise Project, Payette Division (Idaho)

Fiscal Year 1982 Appropriation.....	\$ 30,000
Fiscal Year 1983 Appropriation Request.....	\$ 620,000

Construction will continue on minimum health and safety facilities at Cascade and Black Canyon reservoirs.

Little Wood River Project (Idaho)

Fiscal Year 1982 Appropriation.....	\$ 160,000
Fiscal Year 1983 Appropriation Request.....	\$ 115,000

Work will be ongoing on minimum basic health and safety facilities Little Wood River Reservoir.

Minidoka Project, Island Park Dam (Idaho)

Fiscal Year 1982 Appropriation.....	\$ 200,000
Fiscal Year 1983 Appropriation Request.....	\$ 500,000

Safety modification studies will continue.

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Planning Program

<u>Idaho</u>	<u>FY 1982 Program</u>	<u>FY 1983 Program</u>	<u>Report Completion (fiscal year)</u>
<u>GENERAL INVESTIGATIONS</u>			
<u>Wholly within the State</u>			
<u>Appraisal Investigations</u>			
Idaho Anadromous Fish Habitat Restoration	300,000	100,000	1983
<u>Feasibility Investigations</u>			
Minidoka Project, North Side Pumping Division	--	75,000	1985
<u>Advance Planning</u>			
Anderson Ranch Powerplant Third Powerplant, Boise Project	--	300,000	1983
Minidoka Powerplant Enlargement, Minidoka Project	--	350,000	1984
Palisades Powerplant Enlargement, Palisades Project	--	350,000	1984
Subtotal - Wholly within the State	300,000	1,175,000	
<u>Partly within the State</u>			
<u>Feasibility Investigations</u>			
Boise Project, Power and Modifi- cation Study, Idaho, Oregon	168,000	470,000	1986
<u>Special Investigations</u>			
Environmental and Interagency Coordination Activities Pacific Northwest Region, Idaho, Montana, Oregon, Washington, Wyoming	344,000	400,000	Continuing
Minor Work in Connection with Com- pleted Project Investigations Pacific Northwest Region Idaho, Montana, Oregon, Washington, Wyoming	140,000	70,000	Continuing
Technical Assistance to States Pacific Northwest Region, Idaho, Montana, Oregon, Washington, Wyoming	215,000	150,000	Continuing
Subtotal - Partly within the State	867,000	1,090,000	
Total - General Investigations	\$1,167,000	\$2,265,000	

DEPARTMENT OF THE INTERIOR PROGRAM
FOR THE
BUREAU OF RECLAMATION

IDAHO

OPERATION AND MAINTENANCE PROGRAM

	<u>Fiscal Year 1982</u>	<u>Fiscal Year 1983</u>
Boise Project		
(Idaho, Oregon)		
Appropriated Funds	\$ 2,706,000	\$ 3,108,000
Water Users Advances	<u>197,000</u>	<u>218,000</u>
TOTAL PROGRAM	2,903,000	3,326,000
Minidoka Area Projects		
(Idaho, Wyoming)		
Appropriated Funds	2,552,000	3,190,000
Water Users Advances	<u>483,000</u>	<u>508,000</u>
TOTAL PROGRAM	3,035,000	3,698,000

OREGONCONSTRUCTION PROGRAMKlamath Project (California-Oregon)

Fiscal Year 1982 Appropriation	\$ 1,457,000
Fiscal Year 1983 Appropriation Request.....	\$ 1,989,000

Fiscal year 1983 funds will provide for the completion of construction on the West Unit and the completion of subsurface drains, Klamath Straits Unit. Installation of Parshall Flume water measurement device will be completed. Preconstruction activities will continue on the Klamath Straits Drain Enlargement and White Lake Division. A contract will be awarded for the East Unit, Klamath Straits Unit. Work will total \$68,000 in California and \$1,921,000 in Oregon.

Tualatin Project (Oregon)

Fiscal Year 1982 Appropriation.....	\$1,100,000
Fiscal Year 1983 Appropriation Request.....	\$ 510,000

Repair work on the road around Henry Hagg Lake will continue. Preconstruction work will continue on the Spring Hill Pumping Plant intake channel to correct a siltation problem.

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Planning Program

<u>Oregon</u>	<u>FY 1982 Program</u>	<u>FY 1983 Program</u>	<u>Report Completion (fiscal year)</u>
<u>GENERAL INVESTIGATIONS</u>			
<u>Wholly Within The State</u>			
<u>Appraisal Investigations</u>			
Upper Klamath Offstream Storage Study	165,000	100,000	1983
<u>Feasibility Investigations</u>			
Rogue River Basin Project	110,000	100,000	1984
Grants Pass Division	10,000	5,000	1985
Medford Division, Reformation			
Umatilla Basin Project	163,000	125,000	1984
Upper John Day Project	146,000	135,000	1984
Subtotal - Wholly within the State	594,000	465,000	
<u>Partly within the State</u>			
<u>Feasibility Investigations</u>			
Boise Project, Power and Modification Study, Idaho-Oregon	168,000	470,000	1986
<u>Special Investigations</u>			
Environmental and Interagency Coordination Activities			
Pacific Northwest Region, Idaho, Montana, Oregon, Washington, Wyoming	344,000	400,000	Continuing
Investigations of Existing Projects			
Pacific Northwest Region, Idaho, Montana, Oregon, Washington	50,000	150,000	1984
Minor Work in Connection With Completed Project Investigations Pacific Northwest Region Idaho, Montana, Oregon, Washington, Wyoming			
	140,000	70,000	Continuing
Technical Assistance to States			
Pacific Northwest Region, Idaho, Montana, Oregon, Washington, Wyoming	215,000	150,000	Continuing
Mid-Pacific Region, California, Nevada, Oregon	75,000	30,000	Continuing
Subtotal - Partly within the State	992,000	1,270,000	
Total - General Investigations	\$ 1,586,000	\$ 1,735,000	

DEPARTMENT OF THE INTERIOR PROGRAM
FOR THE
BUREAU OF RECLAMATION

OREGON

OPERATION AND MAINTENANCE PROGRAM

	<u>Fiscal Year 1982</u>	<u>Fiscal Year 1983</u>
Boise Project		
(Oregon, Idaho)		
Appropriated Funds	\$ 2,706,000	\$ 3,108,000
Water Users Advances	<u>197,000</u>	<u>218,000</u>
TOTAL PROGRAM	2,903,000	3,326,000
 Crooked River Project		
(Oregon)		
Appropriated Funds	124,000	47,000
 Klamath Project		
(Oregon, California)		
Appropriated Funds	383,000	367,000
Water Users Advances	<u>100,000</u>	<u>120,000</u>
TOTAL PROGRAM	483,000	487,000
 Rogue River, Talent Division		
(Oregon)		
Appropriated Funds	161,000	178,000
 Tualatin Project		
(Oregon)		
Appropriated Funds	33,000	34,000
Water Users Advances	<u>47,000</u>	<u>49,000</u>
TOTAL PROGRAM	80,000	83,000
 Umatilla Project		
(Oregon)		
Appropriated Funds	26,000	29,000
Water Users Advances	<u>12,000</u>	<u>14,000</u>
TOTAL PROGRAM	38,000	43,000

DEPARTMENT OF THE INTERIOR PROGRAM
for the
BUREAU OF RECLAMATION

MONTANACONSTRUCTION PROGRAMHuntley Project (Montana)

Fiscal Year 1982 Appropriation.	\$ 800,000
Fiscal Year 1983 Appropriation Request.	\$ 800,000

Rehabilitation work will continue on canals, laterals, and structures.

Milk River Project, Lake Sherburne Dam, Safety of Dams (Montana)

Fiscal Year 1982 Appropriation.	\$2,600,000
Fiscal Year 1983 Appropriation Request.	\$1,400,000

Funds will provide for continuing modification to the Lake Sherburne Dam.

Pick-Sloan Missouri Basin Program, East Bench Unit (Montana)

Fiscal Year 1982 Appropriation.	\$ 50,000
Fiscal Year 1983 Appropriation Request.	\$ 79,000

Drain construction will continue during fiscal year 1983.

Pick-Sloan Missouri Basin Program, Helena Valley Unit (Montana)

Fiscal Year 1982 Appropriation.	\$
Fiscal Year 1983 Appropriation Request.	\$ 400,000

Rehabilitation work will start on canals and laterals at Helena Valley Unit.

Sun River Project, Greenfields Division (Montana)

Fiscal Year 1982 Appropriation.....	\$1,440,000
Fiscal Year 1983 Appropriation Request.....	\$1,440,000

Funds will allow for the rehabilitation and betterment of carriage and distribution system.

Sun River Project, Willow Creek Dam (Montana)

Fiscal Year 1982 Appropriation.....	\$1,180,000
Fiscal Year 1983 Appropriation Request.....	\$1,940,000

Funds will allow for continued modification of Willow Creek Dam.

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Planning Program

<u>Montana</u>	<u>FY 1982 Program</u>	<u>FY 1983 Program</u>	<u>Report Completion (fiscal year)</u>
<u>GENERAL INVESTIGATIONS</u>			
<u>Wholly within the State</u>			
<u>Appraisal Investigations</u>			
Offstream Storage, Yellowstone River	172,000	106,000	1983
<u>Feasibility Investigations</u>			
Hungry Horse Powerplant Enlargement and Reregulating Reservoir	270,000	225,000	1983
Tiber Powerplant Study	95,000	106,000	1984
<u>Advance Planning</u>			
Yellowtail Afterbay Powerplant	--	300,000	1984
Subtotal - Wholly within the State	537,000	737,000	
<u>Partly within the State</u>			
<u>Special Investigations</u>			
Environmental and Interagency Coordination Activities			
Pacific Northwest Region, Idaho, Montana, Oregon, Washington, Wyoming	344,000	400,000	Continuing
Upper Missouri Region, Montana, North Dakota, South Dakota, Wyoming	278,000	301,000	Continuing
Investigations of Existing Projects			
Upper Missouri Region, Montana, North Dakota, South Dakota, Wyoming	30,000	12,000	Continuing
Minor Work in Connection with completed Project Investigations			
Pacific Northwest Region Idaho, Washington, Montana, Wyoming, Oregon	140,000	70,000	Continuing
Upper Missouri Region North Dakota, South Dakota, Montana, Wyoming	335,569	266,000	Continuing
Technical Assistance to States			
Pacific Northwest Region, Idaho, Montana, Oregon, Washington, Wyoming	215,000	150,000	Continuing
Upper Missouri Region, Montana, North Dakota, South Dakota, Wyoming	105,000	106,000	Continuing
Subtotal - Partly within the State	1,447,569	1,305,000	
Total - General Investigations	\$1,984,569	\$2,042,000	

DEPARTMENT OF THE INTERIOR PROGRAM
FOR THE
BUREAU OF RECLAMATION

MONTANA

OPERATION AND MAINTENANCE PROGRAM

	<u>Fiscal Year 1982</u>	<u>Fiscal Year 1983</u>
Hungry Horse Project (Montana)		
Appropriated Funds	\$ 1,141,000	\$ 1,336,000
Milk River Project (Montana)		
Appropriated Funds	28,000	32,000
Water Users Advances	<u>122,000</u>	<u>102,000</u>
TOTAL PROGRAM	150,000	134,000
P-S MBP, Upper Missouri (Montana, Wyoming, South Dakota)		
Appropriated Funds	4,329,000	6,657,000
Water Users Advances	<u>46,000</u>	<u>46,000</u>
TOTAL PROGRAM	4,375,000	6,703,000

WASHINGTONCONSTRUCTION PROGRAMChief Joseph Dam Project, Oroville-Tonasket Unit (Washington)

Fiscal Year 1982 Appropriation.....	\$10,633,000
Fiscal Year 1983 Appropriation Request.....	\$16,700,000

Construction of the Cordell and Crater Lakes Pump Distribution Systems will be completed. Land and rights acquisition will continue on the Ellisford, Tonasket, Bonaparte Creek and Osoyoos systems. Preconstruction work will continue on the Osoyoos system and fish and wildlife facilities. A contract will be awarded for construction of the Ellisford, Tonasket, and Bonaparte Creek systems.

Chief Joseph Dam Project, Whitestone Coulee Unit (Washington)

Fiscal Year 1982 Appropriation.....	\$ 160,000
Fiscal Year 1983 Appropriation Request.....	\$ 765,000

Work on Spectacle Lake laterals and Toats Coulee wead screen will be completed. Contracts will be awarded for modifying the North Branch Canal and to replace flowmeters.

Columbia Basin Project (Washington)

Fiscal Year 1982 Appropriation.....	\$41,450,000
Fiscal Year 1983 Appropriation Request.....	\$50,379,000

In fiscal year 1983, the Irrigation Facilities program provides for completion of pumping/generating units 11 and 12 and the Franklin D. Roosevelt Lake fish study. Work on essential drainage and supplemental construction will continue. Preconstruction activities will continue on the Deferred and Bypassed Lands and the East High Canal Irrigation Systems. Construction will be initiated on the Block 26 Laterals.

At the Third Powerplant, work on the downstream stabilization and minor completion and modification work on the powerplant will continue. A contract for installation of replacement circuit breakers will be awarded.

Okanogan Project, Okanogan Irrigation District (Washington)

Fiscal Year 1982 Appropriation.....	\$	
Fiscal Year 1983 Appropriation Request.....		300,000

A rehabilitation program will begin which includes replacing concrete canal lining, modification to the headworks and replacing an open lateral system with a new pressure pipeline system.

Yakima Project, Grandview Irrigation District (Washington)

Fiscal Year 1982 Appropriation.....	\$	5,000
Fiscal Year 1983 Appropriation Request.....	\$	5,000

Preconstruction activities will continue.

Yakima Project, Granger Irrigation District (Washington)

Fiscal Year 1982 Appropriation.....	\$	
Fiscal Year 1983 Appropriation Request.....		50,000

A rehabilitation program will be started which will include replacing open laterals with buried pipeline, replacing turnout boxes, installing a trash screen, repairing siphons and canal lining, replacing lateral pipelines, and constructing a spillway and a sediment basin.

Yakima Project, Outlook Irrigation District (Washington)

Fiscal Year 1982 Appropriation.....	\$	10,000
Fiscal Year 1983 Appropriation Request.....	\$	400,000

Replacement of the main discharge pipeline, construction of the auxiliary pumping plant and rehabilitation of the main laterals will be started.

Yakima Project, Sunnyside Board of Control (Washington)

Fiscal Year 1982 Appropriation.....	\$	10,000
Fiscal Year 1983 Appropriation Request.....	\$	145,000

Rehabilitation work will be started on the main diversion facilities.

Yakima Project, Sunnyside Valley Irrigation District (Washington)

Fiscal Year 1982 Appropriation.....	\$	50,000
Fiscal Year 1983 Appropriation Request.....	\$	200,000

Rehabilitation work will be started on the pipeline replacement.

Yakima Project, Yakima-Tieton Irrigation District (Washington)

Fiscal Year 1982 Appropriation.....	\$	1,100,000
Fiscal Year 1983 Appropriation Request.....		\$16,850,000

Rehabilitation work will continue on the regulating dam and the pressure pipeline distribution system.

BUREAU OF RECLAMATION

WASHINGTON

Columbia Basin Project

Major Items	FY 1983 Appropriation
<u>Irrigation Facilities:</u>	
Grand Coulee Pumping/Generating Plant	
Units P/G 9, 10, 11, and 12.....	\$ 2,587,000
Block 26 Laterals.....	7,450,000
Fish and Wildlife Facilities.....	745,000
Drainage Construction.....	5,649,000
Deferred and Supplemental Construction.....	1,348,000
Deferred and Bypassed Lands.....	500,000
East High Canal Irrigation System.....	300,000
Total - Irrigation Facilities.....	\$ 18,779,000
<u>Third Powerplant:</u>	
Third Powerplant (Riverbank Stabilization Program and Clean-up Activities).....	\$ 28,898,000
Third Powerplant Switchyard (Electrical Modifications)	2,653,000
Visitor Facilities.....	49,000
Total - Third Powerplant.....	\$ 31,600,000
Grand Total - Columbia Basin Project.....	\$ 50,379,000

Planning Program

Washington	FY 1982 Program	FY 1983 Program	Report Completion (fiscal year)
<u>GENERAL INVESTIGATIONS</u>			
<u>Wholly within the State</u>			
<u>Feasibility Investigations</u>			
Yakima Project, Cle Elum and Tieton Powerplants	137,000	310,000	1985
Yakima River Basin Water Enhancement Project	409,000	905,000	1986
Subtotal - Wholly within the State	546,000	1,215,000	
<u>Partly within the State</u>			
<u>Special Investigations</u>			
Environmental and Interagency Coordination Activities Pacific Northwest Region, Idaho, Montana, Oregon, Washington, Wyoming	344,000	400,000	Continuing
Minor Work in Connection with Completed Project Investigations Pacific Northwest Region Idaho, Montana, Oregon, Washington, Wyoming	140,000	70,000	Continuing
Technical Assistance to States Pacific Northwest Region, Idaho, Montana, Oregon, Washington, Wyoming	215,000	150,000	Continuing
Subtotal - Partly within the State	699,000	620,000	
Total - General Investigations	\$1,245,000	\$1,835,000	

DEPARTMENT OF THE INTERIOR PROGRAM
FOR THE
BUREAU OF RECLAMATION

WASHINGTON

OPERATION AND MAINTENANCE PROGRAM

	Fiscal Year 1982	Fiscal Year 1983
Columbia Basin Project (Washington)		
Appropriated Funds	\$15,850,000	\$17,143,000
Water Users Advances	556,000	556,000
TOTAL PROGRAM	16,406,000	17,699,000
 Yakima Project (Washington)		
Appropriated Funds	1,288,000	1,604,000
Water Users Advances	342,000	559,000
TOTAL PROGRAM	1,630,000	2,163,000

WYOMINGCONSTRUCTION PROGRAMMinidoka Project, Jackson Lake Dam (Wyoming)

Fiscal Year 1982 Appropriation.....	\$ 500,000
Fiscal Year 1983 Appropriation Request.....	\$2,000,000

Preconstruction work will continue for stabilizing the dam to withstand the maximum credible earthquake.

Pick-Sloan Missouri Basin Program, Owl Creek Unit (Wyoming)

Fiscal Year 1982 Appropriation.....	\$ 40,000
Fiscal Year 1983 Appropriation Request.....	\$ 40,000

Funds will allow for corrective earthwork on Anchor Reservoir.

Pick-Sloan Missouri Basin Program, Riverton Unit (Wyoming)

Fiscal Year 1982 Appropriation.....	\$6,320,000
Fiscal Year 1983 Appropriation Request.....	\$6,450,000

Rehabilitation of existing structures and installation of lining and buried pipe on Wyoming and Pilot Canal and Wyoming, Pilot, and Lost Wells Laterals will continue. Also, continuing will be drain construction and fish and wildlife facilities.

Recreational and Fish and Wildlife Facilities, Upper Colorado River Storage Project (Wyoming)

Fiscal Year 1982 Appropriation.....	\$2,220,000
Fiscal Year 1983 Appropriation Request.....	\$1,310,000

The program provides for continuation of fishery, habitat improvement below Pontenelle Dam, Seedskadee Participating Project.

Shoshone Project, Frannie Division (Wyoming)

Fiscal Year 1982 Appropriation.....	\$200,000
Fiscal Year 1983 Appropriation Request.....	\$350,000

Funds will allow for rehabilitation of canals and laterals.

Shoshone Project, Heart Mountain Division (Wyoming)

Fiscal Year 1982 Appropriation.....	\$600,000
Fiscal Year 1983 Appropriation Request.....	\$700,000

Rehabilitation work will continue on the laterals.

Shoshone Project, Willwood Division (Wyoming)

Fiscal Year 1982 Appropriation.....	\$335,000
Fiscal Year 1983 Appropriation Request.....	\$335,000

Funds will allow for rehabilitation of canals and laterals.

LOAN PROGRAM

Garland Canal Power Project (Wyoming)

Fiscal Year 1982 Appropriation.....	\$1,846,000
Fiscal Year 1983 Appropriation Request.....	\$ 178,000

Funds will be used for power development at Garland Canal.

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Planning Program

	<u>FY 1982 Program</u>	<u>FY 1983 Program</u>	<u>Report Completion (fiscal Year)</u>
<u>Wyoming</u>			
<u>GENERAL INVESTIGATIONS</u>			
<u>Wholly within the State</u>			
<u>Appraisal Investigations</u>			
Shoshone Valley M&I Water Supply	—	200,000	1985
<u>Feasibility Investigations</u>			
North Platte River Hydro- electric Power Study	380,000	320,000	1985
Guernsey Dam Powerplant Enlargement	60,000	100,000	1984
<u>Advance Planning</u>			
Buffalo Bill Powerplant	—	250,000	1984
Buffalo Bill Dam Modification	—	150,000	1984
Subtotal - Wholly within the State	440,000	920,000	
<u>Partly within the State</u>			
<u>Feasibility Investigations</u>			
Wind-Hydroelectric Energy Project, Colorado, Wyoming, Utah	2,757,000	1,943,000	1983
Colorado River Water Quality Improvement Program, Arizona, California, Colorado, Nevada, New Mexico, Utah, Wyoming	5,328,558	5,778,000	Continuing
Colorado River Storage Project, Power Peaking Capacity, Arizona, Colorado, Utah, Wyoming	50,000	100,000	Continuing
<u>Special Investigations</u>			
Environmental and Interagency Coordination Activities Lower Missouri Region, Colorado, Kansas, Nebraska Wyoming	645,000	350,000	Continuing
<u>GENERAL INVESTIGATION</u>			
<u>Partly within the State</u>			
<u>Special Investigations (Continued)</u>			
Pacific Northwest Region, Idaho, Montana, Oregon, Washington, Wyoming	344,000	400,000	Continuing
Upper Colorado Region, Colorado, New Mexico, Utah, Wyoming	120,000	250,000	Continuing
Upper Missouri Region, Montana, North Dakota, South Dakota, Wyoming	278,000	301,000	Continuing
Minor Work in Connection with Completed Project Investigation, Pacific North- west Region, Idaho, Montana, Oregon, Washington	140,000	70,000	Continuing

Upper Colorado Region, Colorado, New Mexico, Utah, Wyoming	63,000	82,000	Continuing
Upper Missouri Region, Montana, North Dakota, South Dakota, Wyoming	335,569	266,000	Continuing
Lower Missouri Region, Colorado, Kansas, Nebraska, Wyoming	100,000	100,000	Continuing
Technical Assistance to States			
Lower Missouri Region	200,000	201,000	Continuing
Pacific Northwest Region	215,000	150,000	Continuing
Upper Colorado Region	110,000	170,000	Continuing
Upper Missouri Region	105,000	106,000	Continuing
<u>Advance Planning</u>			
Saline Water Use and Disposal Opportunities, CRWQIP	--	50,000	1987
Subtotal - Partly within the State	10,793,000	10,317,000	
Total - General Investigations	\$11,233,127	\$11,237,000	

WYOMING

OPERATION AND MAINTENANCE PROGRAM

	Fiscal Year 1982	Fiscal Year 1983
Minidoka Area Projects (Wyoming, Idaho)		
Appropriated Funds	\$ 2,552,000	\$ 3,190,000
Water Users Advances	483,000	508,000
TOTAL PROGRAM	3,035,000	3,698,000
P-S MBP, North Platte Area (Wyoming)		
Appropriated Funds	5,628,000	8,634,000
Water Users Advances	230,000	211,000
TOTAL PROGRAM	5,858,000	8,845,000
P-S MBP, Upper Missouri (Wyoming, Montana, South Dakota)		
Appropriated Funds	4,329,000	6,657,000
Water Users Advances	46,000	46,000
TOTAL PROGRAM	4,375,000	6,703,000

NATIONAL WATER RESOURCE DEVELOPMENT ACTIVITIES

STATEMENT OF JOSEPH TOFANI, PRESIDENT, WATER RESOURCES CONGRESS

Chairman HATFIELD. I would like to call Mr. Joseph Tofani, president of the Water Resources Congress; and Sam Collins.

Mr. Tofani, is Mr. Collins with you or not?

Mr. TOFANI. Not today.

Chairman HATFIELD. I understand you have a plane to catch.

Your full statement will be placed in the record.

Mr. TOFANI. I am Joseph Tofani, president of the Water Resources Congress.

The Water Resources Congress appreciates the opportunity to present its views concerning the funding for the proper development and management of our Nation's water resources.

The Water Resources Congress is a nationwide organization dedicated to the wise use and proper management of our water resources. We are an umbrella organization that is concerned with every drop of water no matter what its use or origin may be.

Our members not only seek the solution of a specific water problem in a specific geographical region, but we participate on a national basis in all water uses. We strive for an accommodation of uses so that all interests may be served effectively and efficiently.

We are concerned that so few Americans are paying attention to water. Many take for granted that there is a sufficient supply of water, but fail to take into account that it is not always at the right place and at the right time. Our water supply is finite, but uses for water continue to grow each day as our population grows and new demands for water are developed.

We are disturbed that there exists in the minds of some a great deal of confusion between needed water resources projects and the old familiar strains that all water projects are pork barrel. We are especially concerned over the attitude of those who oppose water resources development and we find it difficult to understand their position in view of the fact that water projects must be developed if we are to survive as a prosperous nation.

Much of the opposition to water development arises from well intentioned people who do not understand the problems facing this Nation in the water field.

National organizations who seem preoccupied over concerns aimed solely at the environment are not approaching our problems in any balanced fashion. They fail to realize that if we preserved the environment to the ultimate degree, there will not be sufficient water to support our people, or to enjoy all we preserved.

Water quantity, water quality, balanced development, and proper management are the keynotes to our future.

As I have stated many times before, water resources development has evolved in a piecemeal fashion for over a century and a half.

Accompanying every water crisis is a slight interest in water resources development which quickly fades away. This is not only true with water but in other areas as well.

Take energy, for example, we have already forgotten our Project Independence and continue to rely on foreign sources. We have no foreign source of water.

The time has come when we must develop a water program—a program that meets our needs. But I am afraid we are several years late in starting in this direction. However, we must start.

Concerning fiscal year 1983 appropriations, we are aware of the need to balance the budget in the coming years and the need to curb high interest rates and inflation. We also know that the temptation is great to cut water resources programs, but in defense of the water resources budget, it can be factually demonstrated that the program is a gilt-edged investment in water and land resources of our Nation. Dams, reservoirs, navigable channels, and inland and coastal harbors have paid, and are paying, big dividends to our Nation's economy.

Yet the water program has been going steadily downhill for many years. We hope that this trend will soon be reversed. It has been many years since the Army Corps of Engineers has had an authorization bill, and few, if any, new construction starts.

We are concerned at the decreasing Federal participation in funding water projects and at the same time we do not detect any less Federal control over State and local authority.

As a national organization, it is not our policy to single out specific projects for adequate funding. Our member organizations will be presenting testimony on these projects. However, we would like to stress that projects underway should be completed as expeditiously as possible in order that we may obtain the benefits for which they are being constructed.

We are greatly concerned over the reduction in the operation and maintenance budget of the civil works program of the Army Corps of Engineers. It is penny-wise and pound-foolish to spend millions of dollars to construct a project and then to abandon it for lack of maintenance funding.

I know this committee recognizes these facts—you have in the past and I am sure will continue in the future. Considering the many constraints of the Federal budget that exist today, I know this committee will do its very best to provide sufficient funds to continue the orderly maintenance and development of our water projects. To do less would jeopardize a program which dates back to the very beginning of the development of this country.

Thank you for the time afforded me.

Chairman HATFIELD. Thank you, Mr. Tofani.

I believe you were the Chief of Programs at the Corps.

Mr. TOFANI. Yes; I was for 15 years and I was Chief of Policy for a number of years. I spent 32 years with the Corps of Engineers. I worked for the Soil Conservation Service and I worked for the State of Pennsylvania as well.

Chairman HATFIELD. How did you get things done in those days? We don't seem to be able to get done now.

Mr. TOFANI. I think there was a different atmosphere in those days. I think the problems, as you well know, when I was up here with Senator Kerr and Senator McClellan, with the problem of Arkansas, they had deep support. When the problems came down in Georgia, Senator Russell of Georgia had many problems in Georgia, the lower Mississippi Valley, a lot of the problems have been solved. I think what has happened is the fact that there are not many problems, there are no big river developments to be made, the Mississippi, Ohio, Columbia are all pretty well developed. I think the interest has lagged behind, plus the fact, as you well know, the pressures of the social programs of the day are the big things, the cities, the urban problems are putting pressure on the funding.

My concern, being in this business 46 years, is that we have a problem facing us today that is bigger than our energy problem. That is our water problem, and we don't recognize it today, and I am disturbed

that some of the people will find the littlest thing to take you to court. For example, that latest one, the point source pollution from every dam. We have 2 million dams we are going to investigate. Gee whiz, we are never going to get anything done.

I think the thing is shifting now to where we have built certain things and now we have got to maintain these projects and we have got to defend ourselves to maintain the projects.

As you well know, I think it is a shame that the \$150 million the Corps of Engineers has for these projects for maintenance are being held hostage to a user fee charge.

Chairman HATFIELD. You mentioned the great name of Senator Russell—a valued member of our staff, Proctor Jones, was trained under him.

Mr. TOFANI. I understand Gloria Butland was trained under Senator Ellender.

Chairman HATFIELD. And I was trained under Senator Magnuson. [Laughter.]

Senator Magnuson used to tell me, "Mark, what is good for the State of Washington is good for the State of Oregon."

I am saying what is good for Oregon is good for the State of Washington. Two for me and one for you.

Thank you very much.

[The statement follows:]

STATEMENT OF B. JOSEPH TOFANI, PRESIDENT, WATER RESOURCES CONGRESS

The Water Resources Congress appreciates the opportunity to present its views concerning the funding for the proper development and management of our nation's water resources.

I am B. Joseph Tofani, President of the Water Resources Congress, appearing on behalf of Mr. Sam Collins, Chairman of the Board of Directors of the Water Resources Congress and General Manager and Vice President of the Sabine River Authority of Texas, and Lloyd Skinner, Vice Chairman of the Board of Directors of Water Resources Congress and Chairman of the San Georgio-Skinner Macaroni Company, Omaha, Nebraska.

The Water Resources Congress is a nationwide organization dedicated to the wise use and proper management of our water resources. We are an umbrella organization that is concerned with every drop of water, no matter what its use or origin may be. Our members not only seek the solution of a specific water problem in a specific geographical region, but we participate on a national basis in all water uses. We strive for an accommodation of uses so that all interests may be served effectively and efficiently.

We are concerned that so few Americans are paying attention to water. Many take for granted that there is a sufficient supply of water, but fail to take into account that it is not always at the right place and at the right time. Our water supply is finite but uses for water continue to grow each day as our population grows and new demands for water are developed.

We are disturbed that there exists in the minds of some a great deal of confusion between needed water resources projects and the old familiar strains that all water projects are "pork barrel". We are especially concerned over the attitude of those who oppose water resources development and we find it difficult to understand their position in view of the fact that water projects must be developed if we are to survive as a prosperous nation.

Much of the opposition to water development arises from well intentioned people who do not understand the problems facing this nation in the water field.

National organizations who seem preoccupied over concerns aimed solely at the environment are not approaching our problems in any balanced fashion. They fail to realize that if we preserved the environment to the ultimate degree, there will not be sufficient water to support our people, or to enjoy all we preserved.

Water quantity, water quality, balanced development and proper management are the keynotes to our future.

As I have stated many times before, water resources development has evolved in a piecemeal fashion for over a century and a half. Accompanying every water crisis is a slight interest in water resources development which quickly fades away. This is not only true with water but in other areas as well. Take energy, for example, we have already forgotten our project independence and continue to rely on foreign sources. We have no foreign source of water.

The time has come when we must develop a water program -- a program that meets our needs. But I am afraid we are several years late in starting in this direction. However, we must start.

Concerning Fiscal Year 1983 appropriations, we are aware of the need to balance the budget in the coming years and the need to curb high interest rates and inflation. We also know that the temptation is great to cut water resources programs, but in defense of the water resources budget, it can be factually demonstrated that the program is a gilt-edge investment in water and land resources of our nation. Dams, reservoirs, navigable channels, inland and coastal harbors have paid and are paying big dividends to our nation's economy.

Yet the water program has been going steadily down hill for many years. We hope that this trend will soon be reversed. It has been many years since the Army Corps of Engineers has had an authorization bill, and few, if any, new construction starts.

It appears we will not obtain many new construction starts if the cost-sharing proposals of the Administration are implemented as proposed. States and local governments, as well as interested parties, have not had sufficient time to find ways and means to raise the funds to build projects that have been the responsibility of the Federal establishment since the founding of our nation. Some states and local governments are having the same problems as the Federal Government with regard to funding. So, the future looks bleak.

We are concerned at the decreasing Federal participation in funding water projects and at the same time we do not detect any less Federal control over state and local authority.

As a national organization, it is not our policy to single out specific projects for adequate funding. Our member organizations will be presenting testimony on these projects. However, we would like to stress that projects underway should be completed as expeditiously as possible in order that we may obtain the benefits for which they are being constructed.

We are greatly concerned over the reduction in the Operation and Maintenance Budget of the Civil Works program of the Army Corps of Engineers. It is "penny wise and pound foolish" to spend millions of dollars to construct a project and then to abandon it for lack of maintenance funding.

I know this Committee recognizes these facts -- you have in the past and I am sure will continue in the future. Considering the many constraints of the Federal budget that exist today, I know this Committee will do its very best to provide sufficient funds to continue the orderly maintenance and development of our water projects. To do less would jeopardize a program which dates back to the very beginning of the development of this country.

Thank you for the time afforded me.

PORT OF GRAYS HARBOR, WASH.

STATEMENT OF HANK SOIKE, GENERAL MANAGER, PORT OF GRAYS HARBOR, WASH.

Chairman HATFIELD. Mr. Hank Soike, Port of Grays Harbor, Wash. Welcome, neighbor.

Mr. SOIKE. After the last remark, perhaps I should change my statement.

My name is Henry E. Soike. I am the general manager of the Port of Grays Harbor, the only deep-water port on the coast of the State of Washington. I am here to present the Port of Grays Harbor's plea to this committee for restoration of operation and maintenance funding in the amount of \$3,575,000 to the fiscal year 1983 budget.

I have a prepared statement and I would like to comment briefly on some of the things we have touched on to give you an idea of why we think we should stay in business as a deep-water port.

REVIEW OF PROJECT HISTORY

Going back in the history, the Federal Government constructed the first jetty at the entrance of Grays Harbor in 1896 and the second in 1907 and the port has worked with the Federal Government since the early 1920's in dredging channels and improving navigation.

I think it is significant to note that in 1935 the Federal Government determined it was in the national interest to take over maintenance of navigation and Grays Harbor because of the tremendous Federal forest tributary to that harbor.

Another point is that we are now the only surviving deep-water port because Willapa closed in 1976 so that commerce moved north into Grays Harbor. That, of course, eliminated some Federal expense maintaining that facility.

We are proud of the fact that about 1,000 of the population in the United States contributed about 3.7 percent in the 1979 balance-of-trade deficit with Japan. That year there were \$326 million worth of products that went offshore. Another point is that those expanded offshore markets increase the value of timber tributary to that harbor and Federal records will document a tenfold increase in the value of Federal timber over the past 10 years.

We are really pleading today for 6,500 jobs in the region that are attributable to that navigation project and those jobs extend over five counties surrounding the harbor.

We have currently 16-percent unemployment. We anticipate that it will go to at least 24 percent if the harbor is allowed to shoal in.

DEFENSE BENEFITS

And Grays Harbor in the past has played a significant role in that defense. Strange as it seems, you need lumber to win battles, such as we have done in wars, in World War I, World War II, and the Korean conflict, and the Vietnam conflict. We responded in handling munitions in World War II. And while we are struggling to maintain our deep-

water status, we had a visit from the Navy just last week to document what we could do in the case of a future national emergency. And I am sure I don't have to tell the chairman the importance of a complete transportation system. We have some very modern terminal facilities there. A lot of private and public investment in those railroads and highway systems and to complete the link we need to maintain our navigation facilities.

We are also forced to look offshore for market, for timber resources. The Jones Act, the Canadian competition, the southern pine have taken away historic markets on the east coast of the United States.

We became a candidate and listed in the administration's hit list for the deferred maintenance because they identified our cost as being under 5 million tons per year and over \$1 per ton of annual maintenance cost. However, the Seattle District Corps reevaluated that. The Portland Division concurred in the reevaluation. They identified over 5 million tons in 1979 and 89 cents per ton at cost. Of course, if we are taken off the hit list, somebody else is going to go on it, if the \$150 million is maintained.

The higher authority referred the project back to the Seattle District and we undersatnd now they have taken a look at different criteria and figured out a way to keep us on the list. So we are pleading for favorable consideration from the committee to restore the Corps' full capability of \$3,575,000 for fiscal year 1983 O&M funding.

There is a great deal of concern in our community about this issue. I have included a summary of about 100 communications that were sent to the administration expressing that concern and would appreciate if the summary of those communications could be included in the record.

Chairman HATFIELD. I will be happy to receive them. Thank you very much, Mr. Soike. You have been very eloquent, as always, and we appreciate your testimony.

Mr. SOIKE. Thank you and we certainly appreciate the past consideration. Thank you.

[The statement follows:]

STATEMENT OF HENRY E. SOIKE, GENERAL MANAGER, PORT OF
GRAYS HARBOR, WASH.

My name is Henry E. Soike. I am the General Manager of the Port of Grays Harbor, the only deep water port on the coast of the State of Washington. I am here to present the Port of Grays Harbor's plea to this Committee for restoration of operation and maintenance funding in the amount of \$3,575,000 to the FY-83 budget.

DEEP DRAFT NAVIGATION ON GRAYS HARBOR

Overview -- Navigation facility improvements on Grays Harbor date from the late 1800's. In 1896, the Federal Government constructed the first jetty on the south side of the entrance. This was followed by federal construction of the north jetty in 1907. The first channel dredging was undertaken by the Federal Government in 1904. This dredging occurred in the Aberdeen and Hoquiam reaches of the channel. In the early 1920's, the Port of Grays Harbor started regular maintenance dredging in the upper harbor between Grays Harbor City and Aberdeen.

In 1934-35, the U.S. Congress declared the entire project to be in the "national interest" because of the substantial federal timber holdings tributary to Grays Harbor. The engineers of the War Department (later to become the Army Corps of Engineers) were ordered to undertake the maintenance dredging and periodic improvement of the newly established Grays Harbor Federal Navigation Project. Since that time maintenance dredging of shoals has been performed on an annual basis, the north and south jetties have been rehabilitated as required, and other improvements to navigation facilities have been made including channel widening, deepening and realignment.

In 1976, federal operation and maintenance funding was withdrawn from Grays Harbor's neighbor port, Willapa Harbor. This resulted in the immediate closure of that port to deep draft vessels. Since that time, cargoes which would have normally moved out of that port are being shipped from Grays Harbor. Today, Grays Harbor is the only remaining Washington State deep water port with direct access to the Pacific Ocean.

Average annual tonnage of cargo shipped from Grays Harbor is over 3 million tons (a high of 4.2 million tons was reached in 1979). Average annual cost of maintaining and operating the navigation project is over \$3 million. This ratio of \$1 per ton (operation and maintenance expense to tonnage) has been selected by the Reagan Administration as the point where it ceases to be in the national interest to maintain a navigation project. A number of issues which we believe are being ignored are summarized on the following pages. Also,

in recent years several major improvements to the Grays Harbor navigation project have been funded out of the operation and maintenance budget. Typically, such projects as channel widening, realignment, and jetty rehabilitation should be amortized as capital improvements. In our case these projects are now considered part of the average annual O & M expense.

Other issues are as follows:

1. Grays Harbor's wood products exports make a substantial contribution to the U.S. balance of trade.

In 1979, the U.S. trade deficit with Japan was \$8.66 billion. In 1979, the value of wood products shipped from Grays Harbor was \$326.5 million. Grays Harbor, with less than .001% of the U.S. population, produced and exported products equal to 3.7% of the 1979 U.S. balance of trade deficit with Japan.

2. Expanded markets because of Grays Harbor's navigation channel creates higher value on Federally owned timber.

Shipping has created an opportunity for foreign sales, resulting in greater demand, and an over six fold differential between federal timber value on the west side of the Cascade mountains and federal timber on the east side. These foreign markets have also helped push timber values up over 10 times during the last decade. This has resulted in increased revenue to the Federal Government through sale of federal timber. Such dollars do not show up in standard benefit-to-cost ratios.

3. Over 6500 jobs in the region are attributable to the Grays Harbor Navigation Project.

Data from 1979 State Employment Security reports show that 2407 jobs are directly related to producing and exporting wood products from Grays Harbor. These primary jobs support 4100 secondary jobs; i.e., retail sales, and personal and professional services. Primary job breakdown by county is as follows: Grays Harbor 1812, Jefferson 336, Pacific 224, and Mason/Lewis 35.

4. It is estimated that Grays Harbor unemployment would climb from the current 5480 (16%) to 8315 persons (24%) if the navigation project was terminated.

As of December 1981, Grays Harbor's total labor force was 34,140 persons. 5480 of these people were unemployed. If funding for the Grays Harbor Navigation Project is not found, it is assumed that 1812 additional jobs directly involved in producing and exporting wood products will be lost. Further, it is estimated that an additional 1023 secondary jobs will be lost within 12 months of the closure.

5. Grays Harbor has and could continue to play a role in National defense.

During WWI Grays Harbor functioned as the world's largest lumber shipping center in support of the war effort. The port handled lumber, as well as munitions during WWII, and shipped lumber needed during the Korean and Vietnam conflicts.

6. Grays Harbor Navigation Project is part of a total transportation system.

The transportation system which underpins Grays Harbor's maritime commerce industry is an integrated network of streets, highways, rail lines, marine terminals, and the navigation channel. Various activities are underway to keep the system functioning. One of the major rail lines (Union Pacific) has recently completed upgrading it's mainline track into Grays Harbor to accommodate increased rail traffic including unit trains. Major highway improvements are currently being engineered with an estimated cost of \$18 million.

The estimated in-place value of the highway portion of the system is \$319 million, marine terminals \$96 million and rail lines \$60 million, (\$15 million for new mainline track alone.)

7. Credit due from closure of Willapa Harbor resulting in consolidation of cargoes at Grays Harbor.

From 1973 to 1976 the Federal Government spent an average of \$661,700 annually to operate and maintain the Willapa navigation channel. In 1976, maintenance dredging was terminated by the Federal Government. Converted to 1982 dollars, the closure has resulted in annual federal savings of \$1.2 million.

8. Foreign markets are becoming increasingly important for sales of Grays Harbor and Pacific Northwest forest products.

The "Jones Act" mandates that the shipment of cargoes from one U.S. port to another U.S. port must be aboard American owned vessels. This high cost transportation eventually lead to the complete halt of water shipment of wood products to the east coast. (Today no vessels are in service transporting U.S. wood products to the east coast.) These factors, combined with strong competition from southern pine producers, have greatly reduced the east coast market for Northwest wood products. Increased energy costs, and therefore overland transportation costs, have similarly diminished the mid-west and interior U.S. markets. In 1960, 23.2% of Washington and Oregon softwood production went to the northeastern U.S. By 1980 this had plummeted to 2.3%. Northcentral U.S. markets dropped from 22.7% to 8.2% during the same time period. Fortunately, Pacific Rim markets have grown during this period and today are extremely important to the Pacific Northwest. All indications are that the Pacific Rim will become even more important in our future. Obviously, the navigation channel is a critical factor in serving this market.

* * * * *

In conclusion, if the current Administration position is not changed, Grays Harbor faces the possibly insurmountable task of raising over \$3 million annually for operation and maintenance of the Grays Harbor Navigation Project. Without the required maintenance dredging it is estimated that 40% of the cargo tonnage would be lost within 12 months and 100% within 18 months.

The Port of Grays Harbor was placed on the Administration's "hit list" because of annual tonnage reported to be under 5 million and operating costs reported to be over \$1.00 per ton. A re-evaluation by the Seattle District Corps of Engineers indicates tonnage in excess of 5 million for 1979 and operation and maintenance expense of \$.89 per ton.

I feel that the facts presented in this statement clearly identify navigation facilities on Grays Harbor to be in the national interest and urge the Committee's favorable consideration in restoring the Corps' FY-83 operation and maintenance funding capability in the amount of \$3,575,000.

Note:

Attached to my statement is a summary of letters written to the Administration expressing concern about the proposal to defer maintenance dredging on Grays Harbor. Copies of the letters are enclosed for the Committee's review. It would be appreciated if the summary of those expressions of concern is included in the record.

LETTERS OF CONCERN
SUPPORTING CONTINUED MAINTENANCE OF
NAVIGATION FACILITIES AT
GRAYS HARBOR, WASHINGTON

ORGANIZATIONS

State of Washington Legislature -- Memorial No. 115
Washington Public Ports Association -- Lewis R. Holcomb,
Executive Director
Grays Harbor County Commissioners -- Resolution No. 82-30
Grays Harbor County Commissioner -- Omar Youmans
Grays Harbor Chamber of Commerce -- Bob Ruecker, President
Grays Harbor Chamber of Commerce -- Resolution, George Douglass,
Manager
G. H. County Good Roads Association -- Else Korvell, President
United Brotherhood of Carpenters & Joiners of America --
Lynn Daneker, President
City of Hoquiam -- Jimmy D. Englund, Mayor
City of Aberdeen, -- Resolution No. 1982-16
City of Ocean Shores -- Robert L. Olander, City Manager
G. H. Regional Planning Commission -- Resolution No. 142

Washington Citizens for World Trade -- Jim Langlois,
Executive Director

Grays Harbor Opportunities 80's (GHO 80's) -- Tom Quigg
President

International Longshoremen's & Warehousemen's Union --
Glen Ramiskey
President

G. H. Community Action Council, Inc. -- Paul D. Youmans,
Executive Director

G. H. Community Action Council, Inc. -- Jackie M. Bingham
Board Chairperson

G. H. Community Action Council, Inc. -- Board Members

BUSINESS

Berglund, Lenius & Schmidt, Inc. -- Wes Berglund, P. E.

Kaufman-Scroggs Company -- Richard E. Scroggs

Friend & Rikalo, Inc. -- Donald E. Friend, President

Grays Harbor Log Scaling & Grading Bureau -- N.W. McDeavitt,
Manager

Lamb-Grays Harbor Company -- R. E. Shrader, President

Graystone -- Robert J. Bracken, Manager

Bayview -- Robert E. Bush, President

Gerald G. Mertl, Landscape Architect

Street & Lundgren -- Roy E. Lundgren, A.I.A.

Ken Schoenfeld -- John E. McHugh

Aberdeen Federal Savings & Loan -- H. G. Johnson, President

G. H. Pilots Association -- Captain M. R. Flavel, President

INDIVIDUALS

George Douglass
Kelly G. Grubbs
William Phernetton
Alice Phernetton
Daniel G. McCarty
George E. Lamb
L. E. Hippe
Terry Hammock
Peggy J. Polinder
H. E. Norsdtrom
Arne O. Salonen
John L. Hart
Else Korvell
Hans M. Bielski
David E. Enyeart
Michael L. Boss

Michael A. Roberts
Donna M. Gavette
Martha M. Carr
Betty Miller
Duane Langeliers
John C. Hughes
Linda Borth
Pauline Long
Dewey Cox
Michael A. Brown
Ron Raffelson
Stanley J. Sliva
Keith Green
Roger Hathaway
Vincent G. Putman
Warren N. Jewell

INDIVIDUALS--Continued

Kevin V. Gagner
Edward F. Gozart
Helen C. Bohrsen
Charles A. Witt
Ellen Flavel
Robert V. Kycek
Russ Spere
Bob Basich
Cheryl Foster
Debbie Monroe
Nancy Lee Nelson
Dorothy C. Winniecki
Sandra Riechers
Coreen Selberg
M. E. Thomas
Marsha Richardson
Earl E. Fritts

Leonard B. Hinton
Ella M. Hinton
Janet Richardson
Patrick L. Dugan
Ron Laukkanen
Jerry L. Keltner
Marvin Ray Hull
George F. Parrott
Fritz Bramstedt
Susan J. Mesman
Jo Page
Greg Gallington
Margaret Espedal
Karen M. Keogh
Vicki Petrie
Mary H. Perkins
Billy D. Swor

The Daily World -- Editorial - Cartoons

[The Daily World, Aberdeen, Wash., Saturday, Feb. 13, 1982]

REAGAN'S MOVE ENDANGERS PORT

"Reagan to Grays Harbor: Drop Dead!" That's the way the cheeky New York Daily News would have headlined the story telling how the Reagan administration's stripped-down 1983-model "New Federalism" budget abruptly deletes dredging of Grays Harbor.

Fact is that a compromise can and should be worked out. But if the president sticks to his guns and forces the Port to pick up the entire \$3 million annual tab for channel maintenance, the future of Washington's only deep-water coastal port is seriously clouded.

Economic studies have indicated that deep-water navigation in Grays Harbor supports 25 to 30 percent of the local economy.

Reagan sees us as small fry—a "low priority" port that should impose user fees to pay the whole bill. That tactic ignores a century of American history, some constitutional questions and a tremendous export potential that's hardly been tapped.

We stand to lose a vital competitive edge at a time when the Port holds the promise of helping the Harbor diversify its economic base.

Times have been better here, Mr. President, and now this? Tell Stockman to clean his glasses at the same time he's sharpening his pencil. You're missing the boat.

Dredged by the federal government every year since 1905, Grays Harbor is vital to America. For one thing, we play a very substantial role in boosting a favorable balance of trade. The Toyotas and Sonys are arriving by the boatload at docks elsewhere, but we're exporting logs and lumber and pulp.

Moreover, the federal government has tremendous natural resources here in the form of timber tributary to the harbor. The value of the trees in federal forests on our peninsula has increased 10-fold in the past decade.

Port Manager Hank Soike believes that if we're forced to assess a substantial user fee on cargo, we'll see cargo being diverted to ports that don't require dredging. Seattle and Tacoma, as well as Olympia and Port Angeles, for instance. He's buy a user fee if all ports were assessed.

It's easy to see the battle brewing. Republican Sen. Mark Hatfield of Oregon cites the Constitution in opposing federal discrimination among ports. The president's budget omits dredging for the Port of Newport, Hatfield's home town.

Ironically—coming from a former two-term governor of California—the Port of Sacramento, engaged in heavy export of bulk commodities, is in the expendable category, too.

Here on the Harbor, taxpayers and private industry have invested untold millions in shoreside facilities, terminals and berths. Our partnership with Uncle Sam stretches back nearly a century. He has kept the channel clear and the people and private enterprise have done the rest.

Long before this Port was officially incorporated in 1911 (it's one of the two oldest in the state, together with Seattle), the federal government had installed jetties at the entrance to harbor.

It's clearly in the national interest (most assuredly including national defense) to maintain a series of coastal ports.

We believe an equitable compromise would be to work out a plan whereby user fees pay a portion of the dredging bill, while the federal government continues to accept the lion's share of the responsibility for maintaining an important channel of commerce.

Port maintenance and development ought to be a priority for any administration that's committed to putting America back on an even keel—and working.

If you agree, you can help. Call, write a letter or mail this editorial to the president, our senators or congressmen.

AMERICAN ASSOCIATION OF PORT AUTHORITIES

PREPARED STATEMENT

Chairman HATFIELD. Now, the American Association of Port Authorities, Mr. Ronald Brinson.

He is not here? [No response.]

Without objection, his full statement will be placed in the record at this point.

[The statement follows:]

STATEMENT OF J. RONALD BRINSON, PRESIDENT, AMERICAN ASSOCIATION OF
PORT AUTHORITIES

Mr. Chairman, my name is J. Ronald Brinson. I am president of the American Association of Port Authorities. My remarks are directed specifically at the Administration's proposal to cut back, or reduce, the U.S. Army Corps of Engineers' fiscal year 1983 operations and maintenance budget by \$150 million. The port industry views this prospect with great alarm.

The American Association of Port Authorities was founded in 1912 and represents virtually all U.S. port authorities as well as public port agencies in Canada, South America, Central America and the Caribbean. The United States deepdraft port industry consists of 189 ports located on the Atlantic, Gulf and Pacific coasts and on the Great Lakes. In 1980, total throughput of our national port system amounted to 1.9 billion short tons of cargo. Of that, 900.9 million tons represented cargoes moving in U.S. foreign commerce valued at \$297 billion.

The United States is as dependent today on international trade as it has ever been and in many ways more so. Foreign trade accounted for 24 per cent of the U.S. Gross National Product in 1981. More than 98 per cent of U.S. overseas foreign trade by volume and two-thirds of its value moves in deepdraft vessels and is dependent therefore on the services and facilities provided by the nation's seaports.

The general growth of ocean commerce and revolutionary developments that have occurred since World War II have exerted continuous and unrelenting pressure on our ports for expansion and modernization of plant and equipment. The port industry has responded by investing more than \$5 billion in new and improved cargo handling infrastructure during the period of 1946-1978. The cash value of marine terminals serving U.S. deepdraft seaports is estimated to be \$40.4 billion, and their replacement cost at approximately \$54 billion. To meet the future needs of U.S. commerce, the port industry will be investing a billion dollars a year or more through the remainder of this decade to expand its terminal capabilities.

The importance of this commitment is underscored by the fact that in the manufacturing sector, one out of eight U.S. jobs involves production for export. One out of three acres of U.S. farm land is devoted to the growing of export crops. More significantly, every region of the United States is dependent on expanding international trade, and no region is insulated from economic impact of an imbalance in our foreign trade. Likewise, every trading region is vitally dependent upon the continuing capability of our ports as "national assets" to provide the critical link between America's productive heartlands and its growing overseas markets as the necessary infrastructure for international trade.

Our deepdraft port system also serves the vital national security interests of the United States. It is these ports that funnel the millions of tons of petroleum, iron ore, bauxite and other strategic materials essential to our defense industries.

Major naval installations are located at a number of our ports. Our commercial ports also provide the means for deploying our military forces overseas in times of war or international emergency. From both an economic and strategic standpoint, America's deepdraft ports serve her national interests.

The execution of port operations requires the maintenance of adequate and consistent water depths in existing channels, berths, and basins, as well as the development of efficient and modern port facilities. Such operations, however, depend upon maintenance and construction dredging and involve the need to discharge dredged or fill material on a continuing basis.

It is significant in this context that on the basis of a survey of U.S. ports conducted by AAPA's Ad Hoc Dredging Committee in 1979, it was estimated that at that time the impact as a result of reduced port and waterway channel dimensions involved 25 million tons of cargo lost or detained with a value of \$3.4 billion. These figures, with the passage of additional time, would now be at least 20 percent greater. The new shortfall proposed in the President's budget for operation and maintenance for the fiscal year can only enhance the magnitude of these very negative impacts.

We view the proposed \$150 million shortfall as simply compounding an already serious problem. From 1970 to 1982, the Corps of Engineers has documented that dredging costs increased by an average of 18 percent on an annual basis. However, Congressional appropriations for dredging did not keep pace with these cost increases, thus resulting in a true shortfall in the form of deferred maintenance nationwide in the range of ten to 20 percent.

The Administration hopes to bring sufficient pressure on the port industry to solidify and to hasten support for enactment of waterway user charges. This strategy flouts the vital economic and national defense roles of our nation's navigation system. The projected budget "savings" can be adversely offset many fold by reduced U.S. customs revenues, increased costs of cargo movements, a lessening of the U.S. competitive position in world markets, and a further negative multiplier effect on U.S. agriculture and industry.

Needless to say, we are also concerned that marine safety would also be seriously impacted by the proposed reductions.

Notwithstanding the fact that we fully support the thrust of President Reagan's budget efforts, we cannot agree with the proposed operation and maintenance program cuts. They are, I suggest, "penny wise and pound foolish" and most definitely not in the national interest. We, therefore, strongly recommend that this Committee support Fiscal 1983 budget authorizations and appropriations at levels which will ensure that the nation's ports and waterways can continue to make significant contributions to America's national economy and her national security.

Thank you.

CORPS OF ENGINEERS HOPPER DREDGE PROGRAM

STATEMENT OF JOHN DOWNS, PRESIDENT, NATIONAL ASSOCIATION OF DREDGING CONTRACTORS

ACCOMPANIED BY:

J. W. BEAN, PRESIDENT, C. F. BEAN CORP., NEW ORLEANS, LA.

E. P. TANZBERGER, VICE PRESIDENT AND CHIEF FINANCIAL OFFICER,
C. F. BEAN CORP.

F. R. HAZARD, EXECUTIVE VICE PRESIDENT, GREAT LAKES INTERNATIONAL, INC., OAK BROOK, ILL.

DARLENE SIMMERS, WASHINGTON REPRESENTATIVE

Chairman HATFIELD. The National Association of Dredging Contractors, Mr. John Downs, president.

Good afternoon, Mr. Downs.

Would you like to introduce your colleagues?

Mr. Downs. I am Jack Downs, president of the National Association of Dredging Contractors. I am also chairman of the board of Great Lakes International, Inc., Oak Brook, Ill.

With me this morning is Mr. J. W. Bean, president of C. F. Bean Corp., New Orleans, La.; Mr. E. P. Tanzberger, vice president and chief financial officer of C. F. Bean Corp., New Orleans, La.; Mr. F. R. Hazard, executive vice president, Great Lakes International, Inc., Oak Brook, Ill.; and Mrs. Darlene Simmers, Washington representative of our national association.

I would like to first report to you on industry's new hopper dredge capability.

Chairman HATFIELD. I welcome that report.

STATUS OF PRIVATE INDUSTRY HOPPER DREDGE FLEET

Mr. Downs. I am glad to have the opportunity.

As a result of the incentives provided by the Public Law 95-269, the private dredging industry has built 10 new hopper dredges. Industry's fleet includes small-, medium-, and large-class dredges. Currently, industry has nine hopper dredges which are operational.

The *Stuyvesant*, industry's third large-class hopper dredge, was recently commissioned and will be operational this summer.

Industry's hopper dredge fleet has the present capacity to dredge 75,000,000 cubic yards of material annually.

Let me express industry's new hopper dredge capability in more dramatic terms by making a comparison with the Corps' fiscal year 1982 hopper dredge workload.

FEDERAL HOPPER DREDGE WORKLOAD

The Corps' fiscal year 1982 hopper dredge workload is only 52 million cubic yards nationwide. It is obvious that the private dredging industry now has the total capability to perform all of the Corps' hopper dredging requirements in the United States.

In addition to building 10 new hopper dredges, industry has built 4 new large cutterhead dredges and 1 dustpan dredge.

Over the past several years, private industry has invested over a quarter-billion dollars in new equipment.

We are very proud of our accomplishments. However, the industry is confronted by a serious problem—the lack of work. At the present time, six of industry's hopper dredges are idle. They are tied up at dock. Industry's cutterhead or bucket dredges are operating at less than 50 percent of capacity.

A major problem is that the Corps has been setting aside more work for its hopper dredges than they put out for competitive bid. This practice deprives industry of the opportunity to compete for the work and increases the costs to the Government for maintenance dredging. The Corps has failed to comply with the committee's directive to make available not less than 30 million cubic yards of hopper dredgework per year for industry to bid on.

The Corps has also failed to reassess this program in fiscal year 1982 based on industry's capability, as directed by the committee, and thus increase the amount of work to be made available to industry to bid on.

We need your help to get the Corps to comply with the committee's directive. Our continued efforts to resolve this problem with the Corps have been unsuccessful.

NEED FOR PROJECT AUTHORIZATIONS AND CONSTRUCTION STARTS

There is another serious problem. As you know, Mr. Chairman, there have been no new project authorizations in 6 years and no new construction starts in 3 years. The lack of new construction starts for fiscal year 1983 will further delay the initiation of construction of urgently required deep-draft port development projects and other water resources projects which are vital to our national interests.

The initiation of construction in fiscal year 1983 of deep-draft ports and other waterway improvements will also create tens of thousands of construction jobs and other new jobs which are vitally needed at this time to turn our faltering economy around. The funding of the projects will be an investment in America's future.

Major ports of the east coast, west coast, and on the gulf coast are ready to proceed with the development of their new deep-draft port facilities. Some of these ports have already arranged private financing for the construction of the onshore port facilities such as coal handling or oil distribution systems. The investment by the private sector in such facilities will be in the billions of dollars. The continued delay in authorizing or funding these projects will jeopardize these investments.

I want to assure you, Mr. Chairman, the private dredging industry in the United States has the capability to handle all of the new port development construction projects and to get the job done within the necessary timeframes if you decide to appropriate the construction funds.

Industry has the present capability to simultaneously deepen five deep-draft ports, in addition to performing the Corps' annual maintenance dredging workload and other normal work. If any additional equipment is required for port development, industry will build it.

Mr. Chairman, this concludes my testimony and we appreciate the chance to be here.

Chairman HATFIELD. Do any of the other folks wish to make any comment?

Mr. DOWNS. No, sir.

Chairman HATFIELD. Mr. Downs, I am delighted to hear your testimony today. I want to use this occasion to commend you for increasing the capability of the private sector.

As you know, the last time the private sector had a vital role to play was about 1919, when they defaulted on the Ambrose Channel, New York Harbor project. And from that time onward we had to depend upon the Corps for the seagoing hopper dredge fleet.

As you recall, about 1976, it was this encounter that your industry has attempted to revive itself, and identify over the question of the future role of private hopper dredges. With the record of failure of the past, I wasn't much ready to let it be turned over to you to perform on the basis of promises. And that is about all I could see, promises.

And we had two vital problems to deal with, to abandon our Corps of Engineers, the Corps hopper dredge fleet on the basis of verbal statements, but I am just delighted to see out of this confrontation has come some constructive work because, as you know, since World War II, the Corps has retired 63 nonhopper dredges and 20 hopper dredges and where we had 28 hopper dredges in 1950 now there are only 11 today. And by the end of this year, fiscal year 1982, the Corps tells me they expect to be down to a total of eight or nine. And, as you know, the minimum fleet requirement which we passed this legislation, proposed that we have a minimum fleet level of eight.

I want to also observe that on the west coast the Corps offered work to the dredging industry required by what we call a small class which has traditionally been performed by the Corps dredge *Pacific*. That was offered to private industry, and the dredge *Manson* won that contract, the part of the work that will be performed in 1982 along the Oregon coast, other coastal ports where small class has operated.

I just want to say you have certainly performed and I am delighted to know that we have that dual capability and I hope that you are not overbuilding. I hope that you are carefully analyzing the future requirements, because I want to assure you we are not only going to retain a minimum fleet, but we are going to make sure that is a first-class fleet in every way to determine that it shall be as top-notch equipment as there is to be found anywhere, that we hold as reserve fleet for emergency, for war, whatever it may be, because I think it is vital for the Corps to have that capability and that reserve role to play in the whole hopper dredge industry.

But through you, I wish to extend my warmest congratulations, and I must say that I had more than a little doubt as to whether or not that would actually come to this particular level of capability on the part of the private industry, and I think I had justification because of the defaulting in 1919 and not having measurement for over 50 years' time, but indeed you ushered in a new era in hopper dredge capability and performance and for that I give you my heartiest congratulations.

Mr. DOWNS. Thank you, sir. It does my heart good. The year 1919 was a little bit before my time, but I remember the problems a year back and it does my heart good to hear you say so.

[The statement follows:]

STATEMENT OF J. A. DOWNS, PRESIDENT, NATIONAL ASSOCIATION OF
DREDGING CONTRACTORS

Mr. Chairman, my name is J. A. Downs. I am President of the National Association of Dredging Contractors. I am also Chairman of the Board of Great Lakes International, Inc., Oak Brook, Illinois. With me this morning is Mr. J. W. Bean, President of C. F. Bean Corporation, New Orleans, Louisiana; Mr. E. P. Tanzberger, Vice-President and Chief Financial Officer of C. F. Bean Corporation, New Orleans, Louisiana; Mr. F. R. Hazard, Executive Vice-President, Great Lakes International, Inc., Oak Brook, Illinois; and Mrs. Darlene Simmers, Washington Representative, of our National Association.

I would like to first report to you on industry's new hopper dredge capability. As a result of the incentives provided by the P.L. 95-269, the private dredging industry has built 10 new hopper dredges. Industry's fleet includes small, medium, and large class dredges. Currently, industry has 9 hopper dredges which are operational. The "Stuyvesant," industry's third large class hopper dredge was recently commissioned and will be operational this summer. Industry's hopper dredge fleet has the present capacity to dredge 75,000,000 cubic yards of material annually. Let me express industry new hopper dredge capability in more dramatic terms by making a comparison with the Corps FY 1982 hopper dredge workload. The Corps FY 1982 hopper dredge workload is only 52,000,000 cubic yards nationwide. It is obvious that the private dredging industry now has the total capability to perform all of the Corps hopper dredging requirements in the United States.

In addition to building 10 new hopper dredges, industry has built 4 new large cutterhead dredges and 1 dustpan dredge. Over the past several years, private industry has invested over a quarter-billion dollars in new equipment.

We are very proud of our accomplishments. However, the

industry is confronted by a serious problem -- the lack of work. At the present time, 6 of industry's hopper dredges are idle. They are tied-up at dock. Industry's cutterhead or bucket dredges are operating at less than 50% of capacity.

A major problem is that the Corps has been setting aside more work for its hopper dredges than they put out for competitive bid. This practice deprives industry of the opportunity to compete for the work and increases the costs to the Government for maintenance dredging. The Corps has failed to comply with the Committee's directive to make available not less than 30 million cubic yards of hopper dredgework per year for industry to bid on. The Corps has also failed to reassess this program in FY 1982 based on industry's capability, as directed by the Committee, and thus increase the amount of work to be made available to industry to bid on. We need your help to get the Corps to comply with the Committee's directive. Our continued efforts to resolve this problem with the Corps have been unsuccessful.

There is another serious problem. As you know, Mr. Chairman, there have been no new project authorizations in 6 years and no new construction starts in 3 years. The lack of new construction starts for FY 1983 will further delay the initiation of construction of urgently required deepdraft port development projects and other water resources projects which are vital to our national interests.

The existing port system in the United States cannot accommodate the very large ocean-going vessels which require a draft of 50 feet or more for exportation of coal, grain and other commodities or for the importation of oil. The lower costs of transporting goods in very large carriers provides enormous benefits to our economy. The construction of deepdraft ports will not only enable the United States to compete in foreign markets but will significantly improve our balance of payments. The initiation of construction in

FY 1983 of deepdraft ports and other waterway improvements will also create tens of thousands of construction jobs and other new jobs which are vitally needed at this time to turn our faltering economy around. The funding of the projects will be an investment in America's future.

Major ports of the East Coast, West Coast, and on the Gulf Coast are ready to proceed with the development of their new deepdraft port facilities. Some of these ports have already arranged private financing for the construction of the on-shore port facilities such as coal handling or oil distribution systems. The investment by the private sector in such facilities will be in the billions of dollars. The continued delay in authorizing or funding these projects will jeopardize these investments.

I want to assure you, Mr. Chairman, the private dredging industry in the United States has the capability to handle all of the new port development construction projects and to get the job done within the necessary time frames if you decide to appropriate the construction funds.

Industry has 191 major dredging units, and necessary attendant plant, including 10 hopper dredges and 101 cutterhead dredges from 18" to 42" in diameter discharge. Industry also has more than 150 smaller dredges under operation in addition to the 191 major units. We have the capability to handle all of the dredging involved in the planned future construction of deepdraft ports in the United States. Industry has the present capability to simultaneously deepen 5 deepdraft ports, in addition to performing the Corps annual maintenance dredging workload and other normal work. If any additional equipment is required for port development industry will build it.

Mr. Chairman, this concludes my testimony. Thank you.

WATER RESOURCE ISSUES

STATEMENT OF BRENT BLACKWELDER, WASHINGTON REPRESENTATIVE,
ENVIRONMENTAL POLICY CENTER

Chairman HATFIELD. I would like to now invite Mr. Brent Blackwelder, Washington representative of the Environmental Policy Center, to come forward.

Mr. Blackwelder, we have your full statement, which we will be happy to include in the record and if you would like to highlight it, I am delighted to have you do so.

Mr. BLACKWELDER. Thank you, Mr. Chairman.

I want to make four points to you today. If you turn to my statement, you will see a graph of flood damages for the United States, adjusted in constant dollars. The trend line is constantly upward. We have a recommendation to make to the committee to try to reverse that trend. We suggest that you set aside a reserve of 50 percent of the money you appropriate for flood control projects to be used for so-called nonstructural alternatives. The Corps of Engineers has several nonstructural alternatives in the budget now. We supported those consistently and they think a lot more is needed along those lines. In my testimony I find what is meant by nonstructural.

I am sure you are well aware of those.

IRRIGATION PROJECTS

The second concerns irrigation projects. It is my experience in looking at selection of irrigation projects coming before the committee, we are not bringing lots of new land into production, but more and more of the category of irrigation projects.

One group of farmers is reallocated in order to provide increased irrigation; sort of robbing Peter to pay Paul. We submit that does not make good sense.

Our recommendation is far more beneficial to spend the money appropriated for irrigation on increasing the efficiency of irrigation water usage. And I have recently completed a detailed review of methods for increasing the efficiency of use of water in the agricultural sector.

The American Society of American Agricultural Engineers has published two excellent symposiums outlining how irrigation management services, the application of precise amounts of water according to the exact crop needs at a given time can reduce cost to the farmer and reduce the amount of water used and, furthermore, enhance yields.

The problem is that these techniques are not being used across the board, only on a very small percentage of land.

The Director of the Congressional Budget Office pointed out one of the problems with putting forward many of these new irrigation projects is that they constrict other national agricultural objectives. And I cite that testimony in my statement here and I call the committee's attention to the report of the General Accounting Office last year which reviewed six projects from the Bureau of Reclamation's program and could not find a single one that was economically justified in the sense

that it would grow enough crops to repay the cost of investment with interest.

In fact, not a single one of those was going to even be paying back 10 percent of the Federal Government's actual cost in supplying the water.

INFRASTRUCTURE NEEDS IN NORTHEAST AND MIDWEST

The third point, we would like to see a greater redistribution of money in this program toward the infrastructure needs of the Northeast and Midwest. We think now the program is not now in balance in the sense that a disproportionate amount of the money flows to the South and to the West and it is not distributed in accordance with need. Evidence to that point comes both from the General Accounting Office and a series of Price Waterhouse audits which were carried out for the Pentagon.

These audits showed that a large number of reservoirs were sitting there with 15 million acre feet of water unused and uncontracted for.

LOSS OF WETLANDS

My final point is that the Nation is continuing to lease wetlands at a serious rate. An estimated 300,000 acres are lost each year. Some of this loss seems directly from the projects for which you appropriate money.

It is estimated that we have only 20 percent of the bottomland harbor forest still in the lower Mississippi River Valley. We urge this committee not to fund those drainage and swamp clearance projects which are in both the Corps of Engineers and the Bureau of Reclamation budget and to take a look at the "Flood control, Mississippi River and tributary" accounts.

While this account has projects we support, like the Old River Control Structure, it also contains many swamp drainage proposals which we think should be stricken from the project.

TRINITY RIVER PROJECT, TEXAS

That concludes my written statement. I want to submit for the committee file a report from the Dallas Star Telegram which came to my attention because it concerns a project for which the committee has appropriated money for the past decade, Trinity River project. And the gist of this article is that Trinity River Authority is depositing money in the National Bank of Commerce in Dallas which is controlled by the son of one of the board members of the Trinity River Authority and that authority is depositing \$37 million this year in the bank and during the 1980 and 1981 years took out two loans for about \$600,000 apiece with interest rates of 6 and 7.7 percent, respectively.

Now, the authority is hoping to be involved in Trinity River projects. The question we raise is, Are there conflicts of interest here? Is the authority able to do, in fact, without money from the Federal Government? I hope the committee can look into that matter.

Thank you.

Chairman HATFIELD. Mr. Blackwelder, you realize the Trinity River Authority is a State agency, not a Federal agency.

Mr. BLACKWELDER. I understand that. And you understand the relationship between that and the Trinity River project for which you have been appropriating money.

IRRIGATION EFFICIENCY

Chairman HATFIELD. I noted in your comments about irrigation, I have read somewhere, and I don't recall, about the amount of loss in the different irrigation systems. Do you have any of those statistics available with you in terms of loss in the systems of various irrigations that are used?

Mr. BLACKWELDER. Yes. There are three basic types of so-called gravity or surface systems or sprinkler system or trickle or drip system. That minimizes substantially the losses and can achieve efficiency rates at 90 percent or better and that is the most efficient. Then you have the least efficient, being the surface techniques, and if those are not properly managed, the loss—those efficiencies can be weighed out at about 30 percent.

Chairman HATFIELD. Not lined.

Mr. BLACKWELDER. Without canal lining and without appropriate schedules.

Chairman HATFIELD. Mr. Blackwelder, there was one point, too, I thought you might raise, and that is the matter of tighter control and regulation in the manner of building on flood plains that create an awful lot of public requirement for protection and for projects that often-times if there had been stricter zoning and regulations would not have occurred. Isn't this a factor, too, in this whole area you are dealing with?

Mr. BLACKWELDER. Absolutely. That is the ounce of prevention and, in fact, we have supported consistently the flood insurance program as a way of trying to prevent unprotected development in the flood plain in the future. One of the problems, some of the projects derive their benefits from actually underrestricting development in the flood plain area.

The flood control benefits tend to be separated into two parts, benefits from protecting existing development and benefits from protecting future development, and we do not think that is sound policy to use that as a justification.

GEORGETOWN WATERFRONT

Chairman HATFIELD. Let me tell you one in your own backyard, is this project that has been proposed on the Georgetown waterfront, which has been declared a flood plain because of the flooding conditions that have occurred there, the many floods that have occurred over the years, and the seemingly indifference of City Hall here in Washington, the District government, and the licensing and the permitting authorities to take any measure to stop that.

Mr. BLACKWELDER. You are absolutely correct, and we have commended you for your leadership in trying to call that to the attention of authorities.

We have supported the legislation you have introduced on that matter and we have attempted to publicize the recklessness of building a facility in an area that has been inundated 11 times this century alone. It is a 20-year flood plan that we propose to build.

Chairman HATFIELD. And you watch, they will come along with some great device or some fancy development idea of protecting that investment that should never have been placed there in the first place, if they proceed with it. I don't know if we are going to be able to stop them or not, but it seems to me that only part of the Potomac River within the District of Columbia that has not been made into parkland, as it could easily be, and open space which would enhance the values of the property if you want to look at it through economic eyes, but also the beauty, the esthetics of the city itself, it appalls me that the almighty dollar should dictate some policy of this kind and projects without any consideration of what they are ultimately going to have to face.

Mr. BLACKWELDER. I agree with you completely and wanted to let you know that we are working as hard as we can to rectify that.

Chairman HATFIELD. I appreciate that. I agree with you very strongly about the requirement we have to conserve what water we have today in terms of irrigation and the extravagance that we tolerate under water rights and other things that create vested rights. I do feel that it would be far more inexpensive to have a Federal subsidy program if necessary or matching program of some kind to raise these irrigation programs that are in place underway to the highest level of conservation utilization.

Mr. BLACKWELDER. I appreciate that. And in tight budget times, it may be necessary, and we would prefer to see a cutback in some of the new projects which are about to get underway. For example, there are two in Nebraska. I think it would be better for them to benefit all Nebraska than a project to benefit several hundred irrigators at the moment.

The type of improvements that can occur relate both to the type of irrigation systems that you select, the types of delivery system that you have in place, and to the management.

You could have the best system going, and if you do not manage and schedule these water deliveries properly, then you are losing half of what you gain by putting that good capital investment in place.

Chairman HATFIELD. You have been very helpful; I appreciate very much your testimony.

[The statement follows:]

STATEMENT OF DR. BRENT BLACKWELDER, ENVIRONMENTAL POLICY CENTER

The Environmental Policy Center is a national conservation organization which specializes in energy, agriculture, and water issues. We appreciate the opportunity to present testimony.

Water Problems Facing the Nation and Recommended Solutions

1. Flood damages worsening: despite the large amount of money spent on flood control by the Federal Government, flood damages continue to rise. The attached graph clearly shows that apart from inflation, flood damages are showing a continuous upward trend. Counting on the past approach to flood control through dam building, channelization, and levees is not going to stem this rising tide of damage but will increase it.

Solution: the Appropriations Committees should establish a policy of reserving 50% of the money appropriated for water project development to nonstructural approaches to flood problems. Under the label of 'nonstructural' we include: a) flood proofing of buildings, b) relocation out of the flood hazard area, c) flood warning systems, d) flood plain zoning, e) flood plain greenbelts, parks, and open space, f) protection of upstream wetlands and recharge areas which serve as a natural flood storage system, g) erection of poles or markers clearly showing to potential developers and buyers how high previous floods have risen, and h) various combinations of all these methods. While the present budget request from the Administration contains several nonstructural projects, less than one percent of the federal expenditures for water resource development go to such projects despite their tremendous potential to alleviate flood problems.

2. Funding of new irrigation projects contravenes other agricultural policy: building new irrigation projects which provide heavily subsidized water to certain groups of farmers flies in the face of problems of depressed farm prices and the need for continued price supports and set asides. The General Accounting Office reported last March, 1981, on six irrigation projects and found that not a single one would yield enough crop production to cover the cost of the water supplied. Irrigators would be repaying less than 10 percent of the Federal Government's actual cost according to G.A.O. (See Federal Charges For Irrigation Projects Reviewed Do Not Cover Costs PAD 81-07, March 13, 1981.) Alice Rivlin, Director of the Congressional Budget Office, testified this year about the contradictions involved in subsidization of irrigation water:

"These subsidies encourage wasteful use of water in regions that may no longer need subsidized development. They also distort farmers' decisions about which crops to grow...market gluts can occur, driving the market values of those commodities downward, in turn prompting the government to raise values artificially by means of price supports... Under current policy, the federal government will invest roughly \$3.8 billion from 1983 through 1987 in irrigation facilities. Of this amount, roughly \$275 million would be recovered with charges now in place."

Even if agricultural experts are going to rise, there seems to be no rationale for not letting the market demand govern the decision instead of subsidizing crop production in the West.

Recommendation: Eliminate the funding for most new irrigation projects, particularly those that are about to get underway once again or which are in the early stage of construction--Garrison, O'Neill, Narrows, North Loup, Animas-La Plata--and put the money into irrigation management services. Numerous techniques are now available to increase the efficiency of water use in irrigated agriculture. Donald Brosz, an extension engineer from the University of Wyoming, reported to the 1980 National Irrigation Symposium of the American Society of Agricultural Engineers that water conservation measures could: a) reduce diversions by 38.6 million acre-feet (maf), b) reduce net depletions by 3.3 maf, c) reduce return flows by 35.3 maf, and d) free up an additional 4.3 maf for consumptive use. Modern irrigation scheduling techniques save water by indicating the exact amount of water needed for a given crop at a given time. Not enough emphasis is placed on these methods by the Bureau of Reclamation. As a result, many improvements in efficiency in water use are not occurring. We urge the Committee to cut the funding for new projects and to put it instead into improved irrigation management services.

3. Water resource funds maldistributed both by region and by need: most of the federal water development dollars flow to the South and the West, while the

serious infrastructure problems of the Northeast and Midwest are neglected. Not only does one Arizona project receive more money than all of the 16 states from Minnesota across to Maine, but the projects that actually are built in the South and West do not match real needs. The General Accounting Office reported last August that federal reservoirs are sitting with 15 million acre-feet of water uncontracted for and unused. This is an obvious testimony to construction of projects without reference to need.

Recommendation: The Appropriations Committees should take steps to provide greater regional balance in the distribution of water resource development dollars. One such formula is provided in the Domenici-Moynihan legislation based half on population and half on state geographic size. While this formula still has the defect of not being keyed to need, it does correct the regional imbalance. To focus on need we recommend that the Committee not fund any water supply projects for cities for municipalities which are not already practicing a comprehensive water efficiency improvement program. Such a program would consist of the following measures: 1) plumbing code changes are such that low-flow fixtures are required in new construction and hot water pipes are insulated, 2) rate structures are such as to avoid encouraging waste, 3) a program of leak detection and repair is underway, 4) existing dwellings are being retrofitted with low-flow devices, 5) a public education program is in place, 6) all customers are metered, 7) groundwater management and watershed protection programs are in place, 8) and outdoor water use program is in effect, 9) recycling and reuse are permitted subject to health codes, and 10) drought contingency plans have been established. Communities which are serious about their water problems should have no trouble putting these efficiency improvements into place. For example, Philadelphia cut illegal hydrant use from 50 million gallons a day to 10 mgd and reduced peak demand by 200 mgc, using just a couple of the above measures.

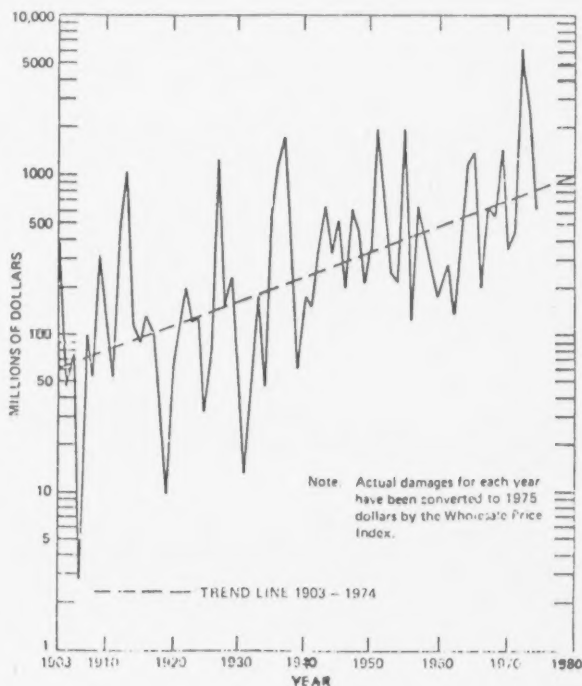
4. Wetland losses continuing: the nation is losing an estimated 300,000 acres of wetlands each year. Some of this loss stems directly from federal water development projects. The loss of bottomland hardwoods in the Lower Mississippi Valley has reached the critical stage, with only about 20% of the original bottomland hardwood swamps remaining. Loss of wetlands in the North Central United States has also been severe. These prairie potholes and marshes host roughly 40% of the breeding ducks in the lower 48 states. Projects like Garrison Diversion would cause the greatest single unit loss of wetlands in North Dakota history.

FLOOD LOSS ESTIMATES FOR THE UNITED STATES

Source: National
Science
Foundation

A Report on Flood Hazard Mitigation

September, 1980



Solution: eliminate the funding of those water development projects of the Corps of Engineers and Bureau of Reclamation which would eliminate wetlands directly or which would lead to the additional clearing of forested land for agriculture. Wetlands are so important that we should not be subsidizing their destruction. Wetlands not only provide vital habitat for fish and wildlife but they help protect water quality, control flooding, and recharge groundwater. We urge the Appropriations Committee to establish a special task force to analyze and reevaluate the entire Mississippi River and Tributaries account. While this account contains some projects which we support like the Old River Control Structure, it is also filled with drainage projects that do not merit further funding and that conflict with other objectives of this program.

Appendix I

AUDITS SHOW UNBUSINESSLIKE MANAGEMENT OF WESTERN BASIN ACCOUNTS

The following is a list of Audits by the Office of the Inspector General in the Department of Interior that have been conducted on certain projects in which the Western Area Power Administration operates as the Federal Power Marketing Agent:

- The Central Valley Project (CVP)
- Pick-Sloan Missouri Basin Program
- The Fryingpan-Arkansas Project
- The Central Arizona Project
- The Colorado River Storage Project and Related Individual Participating Projects

KEY CONCLUSIONS OF THE AUDITS

THE CENTRAL VALLEY PROJECT

Interior's audit report disclosed that revenue and repayment prospects for all reimbursable functions of the Central Valley Project in California are in serious financial trouble now and for the foreseeable future unless basic operating policies, contracts, and possibly laws are changed. The report indicated the rates for hydroelectric power from the Central Valley Project must be raised substantially or the project could face an estimated \$8.8 billion deficit by the year 2028--the point when it is supposed to break even.

PICK-SLOAN MISSOURI BASIN PROGRAM

Interior's audit report concluded that the financial posture of Pick-Sloan is, at best, based on uncertainty, and at worst is unrealistic. According to the report, no one knows, within reasonable limits of accuracy, what rates to charge power users and municipal and industrial water users to repay Pick-Sloan costs. As of September 30, 1976, the Federal Government had invested \$2.4 billion in Pick-Sloan of which \$1.9 billion must be repaid. Eventually, the repayment requirements are estimated to reach \$5.8 billion.

THE FRYINGPAN-ARKANSAS PROJECT

The report identifies several areas in which cost allocation concepts and procedures have not been properly applied by the Water and Power Resources Service (WPRS) on this project. The recommended reallocation of project costs to correct these situations will increase reimbursable costs (Power, Municipal and Industrial Water, Irrigation) \$69 million, exclusive of interest; and decrease nonreimbursable costs (Fish and Wildlife, Recreation, Scenery Conservation, etc.) a comparable amount. The projected end result of such reallocation, over the 50-year repayment

period, is a repayment deficit of approximately \$250 million considering the compounding effect on interest due the Treasury. This is a burden that the general taxpayer, rather than project beneficiaries, will have to bear in the absence of the necessary changes in water and power rates and the repayment contract.

THE CENTRAL ARIZONA PROJECT

The report discusses two Water and Power Resources Service (WPRS) decisions of 1972 which have a significant effect (\$250,000,000) on the prices water users will pay for water from the CAP. When equitable repayment concepts, sound fiscal policy, good business judgment and, in our view, Congressional intent are considered, these decisions were not prudent in terms of protecting the public fisc.

We have recommended that the Department reverse these decisions. The actions recommended would require water customers, who directly benefit from CAP facilities, to repay a more appropriate share of Federal construction and financing costs. Otherwise, they will be relieved of an obligation to repay about \$250 million of interest costs that will then have to be borne by the general taxpayers.

THE COLORADO RIVER STORAGE PROJECT AND RELATED INDIVIDUAL PARTICIPATING PROJECTS

One potential significant problem which requires management's immediate attention and resolution is the repayment status of the Bonneville Unit (BU) of the Central Utah participating project. The Water and Power Resources Service (Service) entered into a repayment contract in 1965 with the Central Utah Water Conservancy District (CUWCD) and agreed to contract provisions which explicitly limit CUWCD's repayment obligation to \$156.8 million. Based on the Service's estimate to complete the project, this contractual limitation on reimbursable costs will preclude recovery of additional reimbursable costs of about \$198 million. Although the Service forecasts that construction expenditures for BU will exceed contract repayment obligations in fiscal year 1981, necessary amendatory contract actions providing for repayment of the project cost increases have not yet been taken.

In the area of irrigators' ability to pay, we noted that the Service recently completed an analysis which shows that since the date the CUWCD executed its repayment contract, the ability to pay for irrigators in the project service area has increased from \$16.4 to \$69 million. While the \$69 million is a preliminary estimate subject to change, the long term repayment contract nonetheless contains no provision for increasing repayment obligations to recognize substantial increases in ability to pay. When the CUWCD contract is amended to cover increased construction costs, the Service should at that time include contract language which insures that water rates paid by irrigators are based upon current periodic determinations of ability to pay.

Our review of the 1977 Power Repayment Study (PRS) disclosed that projected power rates are adequate to repay project costs. However, we determined that data used for the PRS understated interest costs on future replacements and additions, and understated participating project investment costs by about \$185 million.

OPPOSITION TO VARIOUS WATER PROJECTS

STATEMENT OF CHARLENE DOUGHERTY, DIRECTOR OF LEGISLATION, NATIONAL AUDUBON SOCIETY

Chairman HATFIELD. The National Audubon Society is our next witness.

Ms. DOUGHERTY. Thank you very much for allowing us to testify.

Chairman HATFIELD. Your full statement will be placed into the record. You may proceed to highlight it at this time.

Ms. DOUGHERTY. I will highlight it in the interest of time.

I am the director of legislation for the National Audubon Society and as such I represent approximately one-half million members of the Audubon Society and some 470 chapters nationwide. As part of my job, it is more than just working as a lobbyist for the National Audubon Society, but it is serving as the eyes and ears for our members here in Washington and conveying their concerns to you.

I think it might be of interest to you to know how we choose which particular water issues to work on. We listen to our chapters and when they have particular strong concerns about a project, we use that criteria as setting our priorities for lobbying here in Washington.

PROJECT OPPOSED BY AUDUBON SOCIETY

In my prepared statement, I have listed some of the projects which our members and chapters have indicated that they would like to see this committee recommend no funding for for this year. They include Tennessee-Tombigbee Waterway; TVA's Columbia Dam; the O'Neill unit in Nebraska, which Mr. Blackwelder referred to; and in particular the Garrison diversion unit in North Dakota.

RECLAMATION BUDGET REQUEST

In preparing for today's hearing, I spent some time traveling around the country and talking to our membership, finding out what their concerns were, and one of the themes that came forward again and again was the Bureau of Reclamation's budget. None of our members can understand how the Bureau, and how the administration can be recommending a budget that is 23 percent higher than last year at a time when other programs are being severely reduced, if not eliminated outright. And I would like to convey to you our concern about that particular budget increase and urge that you do what you can to reduce the level of spending for the Bureau projects.

GARRISON DIVERSION UNIT, NORTH DAKOTA

Let me turn to a few specifics about the Garrison project in the interest of time. I talked about some others in my statement.

The House of Representatives last year came very close to defeating the appropriations for the Garrison unit. Later in November by a vote of 314 to 67, the House defeated language that the Senate added, which would have overturned the court order which actually enjoined construction of the project.

Since that time, the court has issued a stay on that injunction and the Bureau is now allowed to proceed with the construction of the Garrison project.

I would like to emphasize that the litigation is by no means over, it is still pending before the court of appeals.

Regardless of the fact that litigation is pending before the court, the Bureau has announced its intention before this committee and the House committee to proceed full speed ahead with construction on the Garrison project. We have roughly \$7 million in unspent funds which have been appropriated.

The administration is asking \$4 million more for fiscal year 1983 and it is my understanding that in their appearance before this committee several weeks ago, Secretary Watt and Commissioner Broadbent indicated that they intend to move another \$10 million from elsewhere in the Bureau of Reclamation's budget to the Garrison project. All this money totaled will be about \$21 million to be spent on Garrison. And I would like to urge the committee to not let the Bureau proceed full speed ahead with construction at this time.

The environmental problems are still not resolved. The Canadian Government has tremendous concern about the impacts of that project on Canada and these have not been resolved. Therefore, I would urge that before you allow this kind of money to be spent, that we take some time to try to work out these problems.

I would like to make one final point, and then I will conclude.

INNOVATIVE PROJECT FINANCING

There is one area, and I think you will be interested to know we have some agreement at least with Secretary Watt, at least in concept. The Secretary has said again and again that he would like to see a system of user fees and a system of financial arrangements for water projects for the beneficiaries to pay a greater share of the cost of those projects. We do support that concept. We do believe the beneficiaries should pay a greater share of the cost of projects.

I think if some sort of financial arrangement of determining water projects had been in place at an earlier time, projects such as the O'Neill unit in Nebraska and the Garrison unit in North Dakota probably never would have gotten off the ground. Subsidies these irrigators are enjoying are rather massive. I think if they had to pay as much as half of the cost they would have taken another look at that project and decided it wasn't worth the price.

In conclusion, I would like to say that we recognize that your job in looking at all these projects is a very, very difficult one in light of the budget situation. You have hard choices to make, priorities that have to be set are going to be difficult.

Our recommendations are related to a few of these projects and we would like to work with the committee in helping your job be a little bit easier. I will answer any questions if you have any.

Chairman HATFIELD. Thank you very much.

Your testimony was very timely. We appreciate your being here today.

Ms. Dougherty, have you been birding recently?

Ms. DOUGHERTY. Watching?

Chairman HATFIELD. Bird watching.

Ms. DOUGHERTY. I have not been out bird watching recently.

Chairman HATFIELD. I was going to ask you what some of the exciting species are you might have seen lately.

Ms. DOUGHERTY. The most exciting experience was jogging on the canal this morning and watching the cardinals, which we seem to have a bumper crop this year in Washington.

Chairman HATFIELD. While out West, I saw a yellow-headed blackbird which was very exciting to see, for a change.

Thank you very much.

Ms. DOUGHERTY. Thank you.

[The statement follows:]

STATEMENT OF CHARLENE DOUGHERTY, DIRECTOR OF LEGISLATION, NATIONAL
AUDUBON SOCIETY

Mr. Chairman and members of the Subcommittee. My name is Charlene Dougherty. I am Director of Legislation for the National Audubon Society. I am here today on behalf of the nearly one-half million members of the National Audubon Society and its some 470 chapters nationwide. Thank you very much for allowing us time to testify before you and register our opposition to continued funding for several of the projects contained in the Administration's energy and water appropriations request for FY 1983. I request that my comments and written statement be included in the hearing record.

For the record, I'd like to point out that the National Audubon Society is opposed to continued funding for several projects in the FY 1983 budget request including the Garrison Diversion project in North Dakota, the O'Neill Unit in Nebraska, the Tennessee-Tombigbee Waterway, the Tennessee Valley Authority's Columbia Dam and the Clinch River Breeder Reactor. Because of time constraints, I will confine my statement to the Garrison and O'Neill projects. We will be happy to furnish additional information for you on any of these projects, and our reasons for opposing them, if you so wish.

Part of my responsibilities at the National Audubon Society is to serve as the eyes and ears in Washington for our many activist members, and in turn, transmit their concerns to the Congress. There is strong opposition among our members to each of the projects I have mentioned. The opposition is particularly strong among the members who live in or near the areas affected by these projects. Several of our members and field staff wished to be here today to share with you personally their concerns about the project. The expense of coming to Washington at this time for a short appearance was simply too great and they asked me to convey to you their deep concern about these projects. You will receive in-depth written statements from our field staff and members who are intimately familiar with these projects and I request that you include their statements in the hearing record.

In preparing for coming here today, I spent many hours talking to our members and field staff about what message they wanted me to convey to you today. Besides their opposition to specific projects, several general themes emerged.

The first is an appeal for basic reforms in how we allocate money for public works projects, and more specifically, an appeal to drastically reduce the federal subsidy involved with these projects. We recognize that many projects are very much needed and vital to the healthy and productive growth of this country. Other projects clearly fall in that category we call "pork barrel." One basic reform we advocate is a requirement that direct beneficiaries of water projects be required to pay a greater share than is now the case of the costs of construction, operation and maintenance of those projects. If the direct beneficiaries shared more of the costs, we believe that a much harder "market-place" decision making process would occur and fewer economically marginal projects would be built.

The second theme which emerged in my discussions with members was a deep anxiety about the federal budget, the huge federal deficit, and the economy in general. I encountered opposition -- even resentment and certainly disbelief -- to the Administration's proposed 23% increase in the Bureau's construction budget. No one I talked to could understand increasing this budget, when so many other vital and important programs were being slashed. I was asked over and over again how continued funding for these projects, let alone increased spending, could be justified in these troubled times. Our members are concerned about what appears to be a "business as usual" attitude when it comes to spending for water projects, while other critical programs are being severely cut or eliminated altogether.

To illustrate our concern: The Administration's budget request for the Tennessee and the Clinch River Breeder Reactor amounts to almost one-half billion dollars for this coming fiscal year alone! Their budget request for FY 1983 for the four water projects I mentioned is almost \$200 million. That may not sound like much, but it is our conviction that this money can best be applied elsewhere.

While we -- the National Audubon Society and members of this Committee -- have engaged in debate in past years over the merits of various projects, I sense the parameters of the debate will be different this year. From traveling around the country and talking to our members, I find they are deeply anxious about the economy and they are more willing and more mobilized than ever before to work on -- to be heard on -- the basic economic decisions which are before us. The economic issues -- the dollars to be spent, the subsidies, the spending priorities -- will dominate our debate more than ever before. In the coming months ahead, you (and we) are going to

have to make some very difficult choices as program priorities are set and decisions are made regarding which programs to fund or not and how those limited tax dollars are allocated. While the decisions will be hard and painful, this is also a time of great opportunity to reexamine priorities and projects established in less troubled times. We have some recommendations for you.

Allow me to discuss briefly two Bureau of Reclamation projects: the Garrison project in North Dakota and the O'Neill unit in Nebraska.

Last year, Garrison suffered a major setback in Congress when the House voted 314 to 67 to reject language added by the Senate to the Energy and Water appropriations bill setting aside court-imposed restrictions on the project. We believe that vote indicated a high level of concern among House Members about the Garrison project. That vote clearly and emphatically demonstrated an unwillingness to proceed with full-scale construction until the process prescribed by the courts for resolving Garrison's many problems, international and otherwise, had been implemented.

As you recall, the court, responding to our lawsuit, enjoined construction of the project pending resolution of major environmental and international problems by the Congress. These problems have arisen since the project was first authorized some seventeen years ago. Because of the conflict between Congressionally enacted laws and treaties -- the National Environmental Policy Act and the Boundary Water Treaty with Canada -- and a Congressionally authorized project, the decision of whether to proceed with the original project or some modified version of the project is properly the determination of the Congress. This decision, I urge, should not be an ad hoc one, but rather the result of careful and complete debate.

In January 1982, the Court of Appeals issued a stay on the injunction thus permitting the Bureau to resume construction. The Court, however, has not yet ruled on the merits of our lawsuit although we anticipate a ruling this year. Even though litigation -- ours as well as legal action initiated by others, is pending in several courts, the Bureau has indicated its intention to proceed full speed ahead with construction. And, in addition to their \$4 million dollar request for FY 1983, the Department has stated they will shift \$10 million from elsewhere in their budget to the Garrison account. The Bureau's intention to resume construction and commit substantial financial resources to the project flies in the face of last November's vote in the House. In our estimation, these actions by the Bureau are nothing less than an attempt to steam-roll the project along in flagrant disregard for the international and environmental consequences.

I urge you to not only delete the \$4 million in the FY 1983 budget request, but to register your strong disapproval of the Department's proposed shift of \$10 million into the Garrison project. The Bureau has approximately \$7 million now in unexpended funds for Garrison. Any additional spending -- any spending at all for that matter -- while the major economic, environmental, and international problems remain unresolved is a true waste of taxpayer dollars.

I want to emphasize that there is a real Catch-22 associated with the Garrison project. It is generally well-known that the project cannot be built as authorized without violating the 1909 Boundary Waters Treaty with Canada and causing irreparable damage to Canadian waters and fisheries. The International Joint Commission in its 1977 report on the project concluded that the authorized project would cause significant injury to health and property in Canada and recommended that those portions of the project affecting Canada not be built. If we accepted the IJC recommendation, this would preclude development of about 80 percent of the authorized project. If only those features of the project are built which will have no impact on Canada, or if we build the authorized project but do not fully utilize the features which would adversely affect Canada, then we are doing one of two things: we are building a substantially different project than the one Congress authorized or we are vastly overbuilding the original project. In either event, we are wasting money. And if the project is modified to accommodate Canada's concern or if it's overbuilt, Congress -- the authorizing committee -- should thoroughly and carefully review just what it is the Bureau proposes to build.

We are, in effect, talking about a new project and, as such, it should be subjected to economic and environmental analysis before additional funding is approved or construction allowed to go forward. The Garrison project is now only 15 percent complete -- if one assumes we are still building the originally authorized project. The total estimated cost of the project has soared nearly 500 percent from the original authorization of \$207 million to the most recent Bureau estimate of \$1.1 billion dollars. The increase in the total estimated cost from last year to this year is over \$131 million -- almost as much as the total sum spent on the project to date. And, what are we buying for this enormous expenditure of funds? Irrigation for only 6/10th of 1 percent of North Dakota's agricultural land.

Ironically, the same Administration which has called for user fees, and reduction of federal subsidies and cutting the fat out of the federal budget strongly supports the Garrison project. We are at a loss to understand why. The federal cost per acre for this project is \$3,320. Individual irrigators (the direct beneficiaries) will repay \$77 per acre or roughly two percent of the federal expense.

The authorized Garrison project will require the taking of 220,000 acres to serve 250,000 acres. It will cause enormous environmental damage in North Dakota and in Canada.

In North Dakota the project will destroy or significantly harm twelve wildlife refuges. It will destroy over 70,000 acres of prime waterfowl marshes -- resulting in the single greatest loss of prairie wetlands in North Dakota history. North Dakota, as you well know, has a unique system of shallow lakes, marshland and wetlands which are ideal for the breeding and nesting of a vast variety of ducks, geese and other birds. In fact, North Dakota produces more ducks annually than any other State in the Union except Alaska. The damage the present project will bring to this very special wildlife resource is substantial.

The environmental damage the project will cause in Canada is equally devastating: the authorized project has the potential to transfer rough fish, fish diseases and parasites from the Missouri River Watershed to the Hudson Bay Watershed leading to the irreplaceable damage to the fisheries in Lakes Manitoba and Winnipeg. The return irrigation flows will pollute Canadian waters. The Canadians have repeatedly expressed concern and opposition to the project because of the potential harm to Canada's multi-million dollar fisheries.

Let me briefly talk about another Bureau of Reclamation project. The O'Neill unit in North Central Nebraska is primarily justified as an irrigation project with some minimal recreational and flood control benefits. It is now only 2 percent complete and further construction is enjoined pending resolution of on-going litigation.

According to present Bureau estimates, this project will cost the taxpayers almost \$379,000 million dollars to provide a supplementary water supply for irrigation of 77,000 acres. Much of this area is already irrigated. The cost to the taxpayer of this additional irrigation is \$4,750 per acre -- one of the highest per acre investments for any reclamation project in the country; repayment by the direct beneficiaries is only \$588 per acre. In the process of building this project, the Bureau will have to condemn more than 30,000 acres of private land for project features. The family farmers and ranchers who stand to lose their productive land to this project have had no opportunity to make their voices heard in a reclamation district referendum. This is a true injustice to those landowners who stand to lose a great deal -- and to the taxpayer as well who has to foot the bill.

The O'Neill project, if built, will destroy the most spectacular stretch of the most scenic river in the central part of the Great Plains -- the Niobrara. Local land owners believe so strongly that the Niobrara should be saved that they have initiated a proposal to incorporate 62 miles of the river into the National Wild and Scenic River system. We will continue to work with these landowners to establish protection for the only free flowing river in Nebraska.

The National Audubon Society staff -- here, in the field, and in our headquarters in New York -- has offered time and again to work with the proponents of both the Garrison and O'Neill projects to develop environmentally less damaging alternatives. We continue to stand willing to work with this committee and others to develop less costly, less damaging alternatives.

Before I close I wish to make one additional comment. I read with great interest Secretary Watt's testimony before the Senate appropriations subcommittee on March 6, 1982. Secretary Watt said and I quote:

"Past policies on financing major water projects generally dictated that the Federal government would pay all costs of construction and, where applicable, repayment by project beneficiaries was extended over many years with little or no interest. Though some proposed projects are very much needed, and the benefits exceed their costs, the economic conditions of this country no longer allow for this type of financing. Accordingly, in the very near future, the Cabinet Council on Natural Resources and the Environment will propose for the President's approval policies which will require that future water projects be cost-shared by the States or project beneficiaries and the Federal government."

While we don't agree with the Secretary on many issues, we do agree that where the beneficiaries of a project can be identified they should be required to more fully share in the costs of that project. I cannot help but wonder that if such a cost-sharing system had been in place when the Garrison and O'Neill projects were first introduced, (or a waterway user fee system in place and applicable to the Tenn-Tom), if these projects would have ever been approved. Even a cursory review of the federal costs and the irrigators' repayment levels for both the Garrison and O'Neill projects clearly show that the beneficiaries are receiving large subsidies. I urge you to consider and support basic reforms in the way projects are financed -- for herein lies the key to avoiding any further commitment of federal funds for projects which cannot withstand a real market place test.

In conclusion, I would like to say that these are extraordinary economic times which call for extraordinary measures. We -- as well as you I am sure -- believe we can no longer conduct business as usual. You have a great challenge and opportunity to bring about some real changes and help cut back on wasteful government spending. The best place to start is right here -- with these projects we discussed today.

Thank you for your time.

WATER RESOURCE DEVELOPMENT AND RELATED ISSUES

STATEMENT OF EDWARD R. OSANN, DIRECTOR, WATER RESOURCES PROGRAM, NATIONAL WILDLIFE FEDERATION

Chairman HATFIELD. Mr. Ed Osann, National Wildlife Federation.

Mr. Osann, I understand you are the water resources director.

We are glad to welcome you back to our committee. And we have your full statement which will be made a part of the record, and we would like to have you highlight it at this time.

Mr. OSANN. I will attempt to do so. I appreciate the opportunity to testify.

As you are well aware, the National Wildlife Federation is the largest conservation organization in the country.

During the past decade, our membership has adopted more than 50 resolutions establishing federation policy on various aspects of water resource conservation and development.

We have a long history of involvement in this issue. Unfortunately, Mr. Chairman, our appeals to this committee in the past have not been persuasive with regard to particular projects and at this time I will not enumerate our concerns with individual water projects but, with the permission of the Chair, I would prefer to submit such comments to the committee for the record.

I would like to use the brief time that is available to address some general trends that may be of interest to the committee.

FUTURE OF WATER DEVELOPMENT PROGRAM

We believe that there may be a forest and trees kind of problem. As you have indicated, you have heard nearly 500 witnesses on this year's legislation alone. The great bulk of these witnesses are justifiably concerned about particular projects. The sum total of individual concerns about individual projects still leaves unanswered a major overriding question as to where the Federal water resources development program is headed.

We would like to point out a set of statistics that we think illustrates an interesting trend. When the fiscal 1981 budget was submitted in January 1980, it was estimated at that time that the cost of completing the Corps and the Bureau of Reclamation projects then under construction was \$25.9 billion. In the intervening 2 years, very few new projects have been placed under construction, perhaps one or two dozen projects have been completed, and construction expenditures have exceeded \$2 billion annually. Yet the fiscal 1983 budget documents now estimate that the cost of completing the Corps and Bureau projects now under construction will be more than \$32 billion. We are further from completion, in absolute dollar terms, than we were 2 years ago.

Why is this? We think that the primary reason is that the largest projects now under construction—mostly authorized during the 1940's, 1950's, and 1960's—are now impractical, overly complex, and are stretching the management capabilities of the construction agencies to the breaking point.

PROJECT COST ESCALATION

It would be easy to dismiss the problem as simply the product of inflation. Inflation is barely half the problem. For nine major Reclamation projects that we have reviewed, cost indexing for inflation was responsible for barely 50 percent of the total 1-year increase in estimated project costs, as reported to this committee by the Bureau this year.

Design changes and other construction problems unrelated to management problems accounted for nearly 30 percent of cost increases reported for fiscal year 1982. This is a serious and recurrent problem of cost overruns that needs to be addressed by the Congress.

It also raises some major questions. What are the implications of this negative progress toward project completion? If the problem with cost overruns proves unresolvable in the short- or mid-term, we see at least three major choices. First, steady progress toward completion of all projects now under construction would require a quantum jump in the annual water project appropriations, perhaps a 50- to 100-percent increase. This, we suspect, is highly unlikely, as well as undesirable from our standpoint.

INNOVATIVE PROJECT FINANCING

A second option would be a large infusion of non-Federal money into the program. The administration's port and waterway user fee proposals are one step in this direction, but limited to navigation projects—significant, but not sufficient.

State cost-sharing is another possibility under discussion, but resolution of present funding problems would require cost-sharing on ongoing as well as new projects, and at levels closer to 50 percent than to the 10 to 25 percent that has been under discussion.

The ability and the willingness of the States to undertake this additional funding responsibility, in addition to those already imposed by the New Federalism, is subject to serious question, to say the least.

A third option, and one which we support, is for the Congress and the administration to acknowledge that not all projects currently under

construction will be completed. That raises the question of who will decide and by what criteria. To some it raises the specter of half-built dams and half-dug canals littering the landscape. Yet we are confident that rational criteria could readily be developed for this process which would account for the completion status, net economic value, and environmental impact of projects now underway.

Failure to respond to the phenomenon we have described—the declining rate of completion of projects now underway—will have at least two serious consequences. First, failure to get a grip on this construction backlog will underscore the fiscal impactality of new construction starts, cost-shared or not.

Second, it will reinforce the status quo in construction funding allocations, where certain projects are favored and others fall further behind—not on the basis of publicly established criteria, but on the basis of intramural congressional politics.

DISTRIBUTION OF FEDERAL WATER DEVELOPMENT FUNDING

Table 3 of my statement, along with figure 1, provide a tabular and graphic illustration of the distribution of construction funds in the Federal water resource development program. We believe that this display speaks for itself. The current approach may be acceptable to those members whose concerns do not extend beyond their respective States and districts, but we doubt that it is acceptable to those Members—including members of the Appropriations Committee—who are concerned about an impending national water crisis and are attempting to exercise responsible oversight over the Federal water resources development program.

Mr. Chairman, the National Wildlife Federation was founded 46 years ago to promote the sound management—both conservation and use—of our natural resources. The Nation may well be facing a water crisis in the coming decade, but it might be more aptly termed a “water management crisis.” Our natural and fiscal resources both have limits, and water is becoming too important to allow what has been characterized as pork barrel politics to misdirect Federal investment in the future.

Thank you for this opportunity to represent these views. And I will be happy to respond to questions.

Chairman HATFIELD. We are delighted to have you here. I think I understand your thesis and your concerns and I would only observe it seems to me that your thesis will be better served by concentrating on those projects that have not yet been started, rather than something like the Tennessee-Tombigbee Waterway which is about 80 percent completed.

On the day of dedication and opening of the waterway to traffic you are going to be issuing a statement protesting the project. But at the same time it seems to me you should take the Clinch River Breeder Reactor project that they haven't broken ground on yet—and I am not urging you into Howard Baker's territory, I would never want you to go after any leader of mine. But on the other hand, it seems to me that if

you concentrated on some of these that yet are not really underway, that you are really better served. The Tennessee-Tombigbee is going to be completed, that is just about 80-percent completed. I think the momentum is obviously there; it was long before I ever came on this committee. And I am not so sure that you need my counsel at all in this or any other subject. But I think there is a certain credibility factor or legitimacy to your whole thesis that has diminished a bit when you see the kind of vote that has occurred session after session—the continued commitment on the Tenn-Tom project.

If we get into projects like nuclear reactors where you have a restricted site area and limited work, for instance, I am delighted that we are finally closing WPPS power units 4 and 5 in the Pacific Northwest, and I would like to see them all shut down as soon as we conceivably can do so, but that is a personal view. That kind of project we can restrict in terms of the impact even though dollarwise that is not \$1 billion to build one of those reactors. You are going to save a lot of money, but when you get into these things that involve a lot of earth moving over many, many miles of territory, it is much harder to end that kind of commitment once you are underway.

Mr. OSANN. I appreciate your perspective and your remarks. Unfortunately, the Tennessee-Tombigbee Waterway is not the only problem we have in the water resources programs. Last year we submitted to the committee a list of 12 or 13 projects that were at various stages of completion ranging from 2 percent on up to about 50 percent, in the early stages of construction development and, unfortunately, virtually all those projects were funded.

Chairman HATFIELD. I appreciate the exchanges and your comments today. Thank you.

[The statement follows:]

STATEMENT OF EDWARD R. OSANN, DIRECTOR, WATER RESOURCES PROGRAM, NATIONAL
WILDLIFE FEDERATION

My name is Edward Osann. I am the Director of the National Wildlife Federation's Water Resources Program. The Federation, with over 4.2 million members and supporters and affiliate organizations in all 50 states, Guam, Puerto Rico, and the Virgin Islands, is the nation's largest conservation organization. During the past decade alone, our membership has adopted more than 50 resolutions establishing Federation policy on various aspects of water resource conservation and development. The Federation and its affiliates have a history of working with state officials and the Federal construction agencies to resolve differences over water projects or policies. We have commented on scores of projects; we have litigated numerous times as well, in those instances where earlier efforts to resolve differences have failed. We have committed substantial time and effort to the initial development--and now the defense--of the Water Resources Council's procedures for the planning and evaluation of Federal water projects. We have strongly supported legislative efforts, on both appropriations and authorizations, to redirect the Federal water resources development program.

In the past, our appeals to this committee have not been very persuasive. I will not enumerate our concerns with specific water resource projects at this time, but rather submit such comments to the committee separately for the record. But I would like to use this brief time to address some general trends that may be of concern to the committee.

Where is the Federal water resources program headed? The appropriations bills of the past 5 years, and the budget submitted for FY 1983, leave this overriding question largely unanswered. I submit that in the continuing controversy over specific projects--such as the Tennessee Tombigbee Waterway--many have lost sight of the lack of direction in the national water program.

When the Fiscal 1981 budget was submitted in January of 1980, it was estimated that the cost of completing the Corps and Bureau projects then under construction--after enactment of the FY 1981 budget request--would be \$25.9 BILLION. In the intervening years very few new projects have been placed under construction, perhaps one or two dozen projects have been completed, and construction expenditures have exceeded \$2 billion annually. Yet the Fiscal 1983 budget documents now estimate that the cost of completing the Corps and Bureau projects now under construction will be more than \$32 billion. We are further from completion, in absolute dollars terms, than we were two years ago. (SEE TABLE 1)

Why is this? We think that the primary reason is that the largest projects now under construction--mostly authorized during the 40's, 50's, and 60's--are now impractical, overly complex, and are stretching the management capabilities of the construction agencies to the breaking point. It would be easy to dismiss the problem as simply the product of inflation. Inflation is barely half the problem. For nine major Reclamation projects that we have reviewed (SEE TABLE 2), cost indexing for inflation was responsible for barely 50 percent of the total 1 year increase in estimated project costs, as reported to this committee by the Bureau this year. Design changes and other construction problems unrelated to inflation have accounted for the balance. Last year, such management problems accounted for nearly 30 percent of cost increases reported for FY 1982. This is a serious and recurrent problem of cost over-runs that needs to be addressed by the Congress.

What are the implications of this negative progress toward project completion? If the problem with cost over-runs proves unresolvable in the short or mid-term, we see at least 3 major choices. First, steady progress toward completion of all projects now under construction would require a quantum jump in the annual water project appropriations, perhaps a 50 to 100 percent increase. This, we suspect, is highly unlikely, as well as undesirable from our standpoint.

A second option would be a large infusion of non-federal money into the program. The Administration's port and waterway user fee proposals are one step in this direction, but limited to navigation projects--significant, but not sufficient. State cost-sharing is another possibility under discussion, but resolution of present funding problems would require cost-sharing on ongoing as well as new projects, and at levels closer to 50 percent than to the 10 to 25 percent that has been under discussion. The ability and the willingness of the states to undertake this additional funding responsibility, in addition to those already imposed by the New Federalism, is subject to serious question, to say the least.

A third option, and one which we support, is for the Congress and the Administration to acknowledge that not all projects currently under construction will be completed. That raises the question of who will decide and by what criteria. To some it raises the specter of half built dams and half-dug canals littering the landscape. Yet we are confident that rational criteria could readily be developed for this process which would account for the completion status, net economic value, and environmental impact of projects now underway.

Failure to respond to the phenomenon we have described--the declining rate of completion of projects now underway--will have at least 2 serious consequences. First, failure to get a grip on this construction backlog will underscore the fiscal impracticality of new construction starts, cost-shared or not. Secondly, it will reinforce the status quo in construction funding allocations, where certain projects are favored and others fall further behind--not on the basis of publicly established criteria, but on the basis of intramural Congressional politics. Table 3 of this statement, along with Figure 1, provide a tabular and graphic illustration of the distribution of construction funds in the Federal water resource development program. We believe that this display speaks for itself. The current approach may be acceptable to those Members whose concerns do not extend beyond their respective states and districts, but we doubt that it is acceptable to those Members--including Members of the Appropriations Committee--who are concerned about an impending national water crisis and are attempting to exercise responsible oversight over the Federal water resources development program.

Mr. Chairman, the National Wildlife Federation was founded 46 years ago to promote the sound management--both conservation and use--of our natural resources. The nation may well be facing a water crisis in the coming decade, but it might be more aptly termed a "water management crisis." Our natural and fiscal resources both have limits, and water is becoming too important to allow what has been characterized as "pork barrel" politics to misdirect Federal investment in the future.

Thank you for this opportunity to present these views.

NWF 2/8/82

TABLE 1

5 YEAR BUDGETARY TRENDS
WATER RESOURCES CONSTRUCTION
FUNCTIONS 301 ~~443~~

	FY 79	FY 80	FY 81	FY 82	FY 83
<u>APPROPRIATIONS REQUIRED TO COMPLETE WATER PROJECTS UNDER CONSTRUCTION</u>					
Corps of Engineers		10,586.0	16,468.4	19,704.6	20,317.2
(Construction, General)		(7,242.0)	(9,973.4)	(10,930.2)	(10,486.3)
(Mississippi River & Tribs.)		(3,344.0)	(6,495.0)	(8,774.4)	(9,830.9)
Bureau of Reclamation		7,165.4	9,338.9	10,435.9	11,845.6
(Construction Program)		(5,348.1)	(6,598.1)	(7,922.5)	(8,910.2)
(Colorado River Basin Project)		(994.2)	(1,063.9)	(1,141.7)	(1,344.8)
(Upper Colorado River Storage Project)		(823.1)	(1,676.9)	(1,371.6)	(1,590.6)
Total		17,751.4	25,807.3	30,140.5	32,162.8

SOURCE: Budget of the United States Government, Appendix,
Fiscal Years 1980, 1981, 1982, 1983.

TABLE 2

COMPLETION STATUS OF SELECTED WATER PROJECTS
BUREAU OF RECLAMATION

Project (Year Authorized)	Budget Submission				
	1978	1979	1980	1981	1982
Bonneville Unit, CUP (1956)					
% complete	17	18	22	20	17
costs remaining	598.6	604.3	583.9	769.1	1,033.3
Central Arizona Project (1968)					
% complete	20	25	32	30	30
costs remaining	1,180.5	1,057.2	997.0	1,057.7	1,141.4
Dallas Creek (1968)					
% complete	6	18	23	31	49
costs remaining	23.0	15.3	24.3	21.8	25.4
Dolores Project (1968)					
% complete	1	2	4	8	17
costs remaining	166.7	163.7	160.2	173.3	210.3
Garrison Diversion (1965)					
% complete	19		20	18	15
costs remaining	417.9		540.4	640.1	805.4
North Loup Unit (1972)					
% complete	1	2	5	7	6
costs remaining	114.4	122.2	115.9	126.3	181.7
O'Neill Unit (1972)					
% complete	1	2	2	2	2
costs remaining	164.9	176.6	182.3	219.3	321.3
San Luis Unit, CVP (1960)					
% complete	61	55	55	64	63
costs remaining	297.7	401.3	442.5	304.4	331.0
Yuma Desalting Plant (1974)					
% complete	18	26	28	38	35
costs remaining	207.0	197.0	197.8	167.8	221.3

All costs are stated in millions of dollars.

TABLE 3

Distribution of funds allocated by states, Water Resource Development

State (all #'s in 000's)	% Const.	Total Const.	% Exp.	Total Exp.
Alabama	4.3	93,600		122,575
Alaska	0.5	11,300		15,117
Arizona	9.6	211,040		213,293
Arkansas	2.3	50,465		103,004
California	7.9	172,952		239,545
Colorado	6.6	143,949		156,775
Connecticut	0.04	860		7,223
D. C.	0.1	3,204		41,042
Delaware	0	0		3,461
Florida	2.2	47,175		70,763
Georgia	2.4	53,580		92,010
Hawaii	1.4	31,500		33,844
Idaho	0.6	14,205		24,739
Illinois	2.8	60,725		165,978
Indiana	0.2	4,540		7,997
Iowa	0.5	11,003		24,438
Kansas	0.2	4,700		19,255
Kentucky	2.3	50,403		85,964
Louisiana	8.0	173,991		243,215
Maine	0	0		380
Maryland	0.03	754		10,387
Massachusetts	0.3	6,745		18,015
Michigan	0.1	2,385		40,784
Minnesota	0.7	15,050		22,132
Mississippi	5.1	111,316		133,040
Missouri	4.9	106,196		126,448
Montana	0.9	20,259		29,047
Nebraska	2.3	50,683		62,834
Nevada	0.5	10,719		11,305
New Hampshire	0	0		2,529
New Jersey	0.5	10,800		41,153
New Mexico	0.4	8,065		16,681
New York	0.2	4,450		28,019
North Carolina	0.9	20,750		30,434
North Dakota	0.2	5,000		14,434
Ohio	1.1	25,131		53,328
Oklahoma	4.1	90,277		116,370
Oregon	1.8	38,891		85,351
Pennsylvania	0.8	18,350		55,806
Rhode Island	0	0		192
South Carolina	2.6	57,840		65,598
South Dakota	0.2	4,520		22,969
Tennessee	1.5	33,132		54,817
Texas	4.8	105,863		190,543
Utah	4.4	95,530		96,571
Vermont	0	0		1,455
Virginia	0.07	380		20,095
Washington	6.6	145,001		222,342
West Virginia	1.1	24,404		51,939
Wisconsin	0.007	151		4,169
Wyoming	0.5	11,135		20,950
Puerto Rico	1.3	29,000		29,280
Guam	0	0		525
Virgin Islands	0	0		147
Totals:	100	2,192,023		

FIGURE 1

**DISTRIBUTION OF CONSTRUCTION FUNDS ALLOCATED BY STATES
FEDERAL WATER RESOURCE DEVELOPMENT PROGRAM**
(Corps of Engineers, Bureau of Reclamation, Tennessee Valley Authority)
(FISCAL 1983 BUDGET)

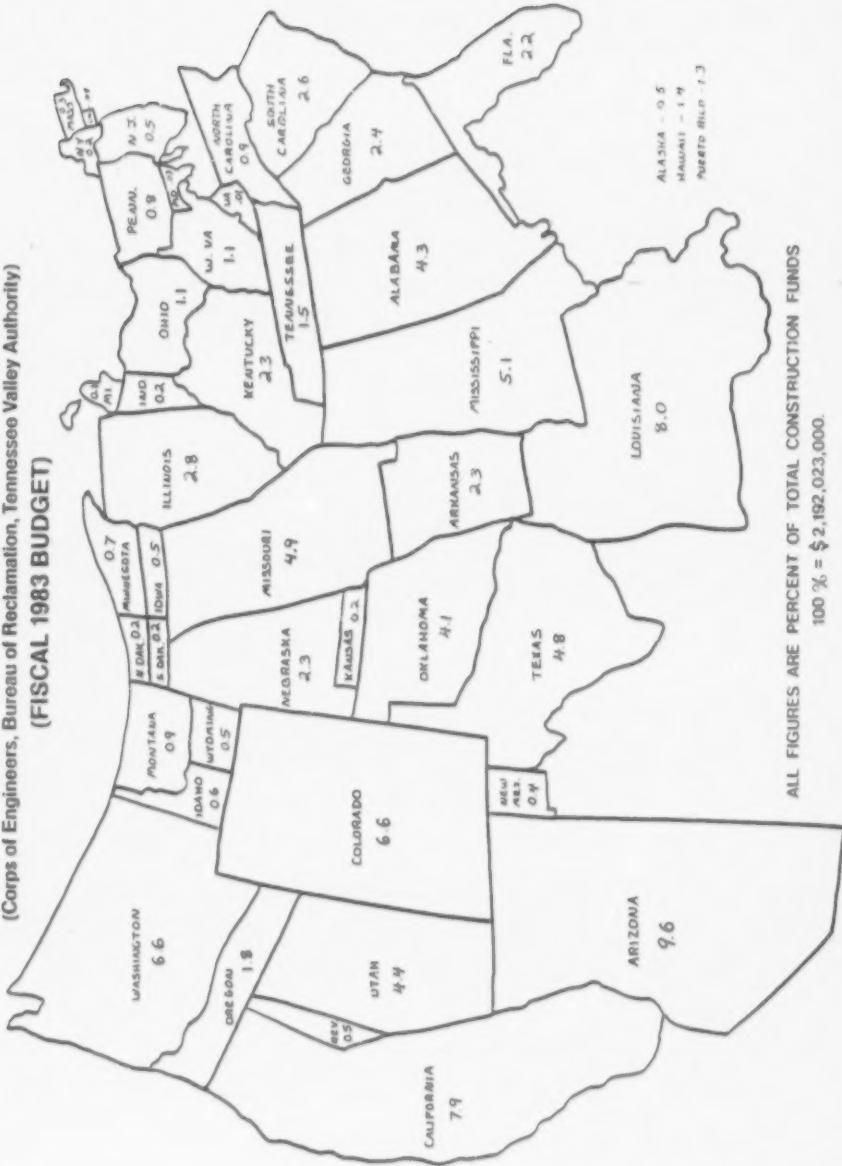


FIGURE 1 (continued)

Footnote: Project costs are proportionally allocated between states on the following multi-state projects:

- 1) Smithland Locks and Dam: Kentucky, Illinois
- 2) Lock & Dam 52: Kentucky, Illinois
- 3) Lock & Dam 53: Kentucky, Illinois
- 4) Big South Fork River: Kentucky, Tennessee
- 5) Missouri River, Sioux City to mouth: Nebraska, Iowa
- 6) Bloomington Lake: Maryland, West Virginia
- 7) Tennessee-Tombigbee Waterway: Mississippi, Alabama
- 8) Lock & Dam 26: Missouri, Illinois
- 9) St. Francis Basin, M.R.&T.: Arkansas, Missouri
- 10) Gallipolis Lock & Dam (Planning): Ohio, West Virginia
- 11) Bonneville Navigation Lock: Oregon, Washington
- 12) Bonneville Second Powerhouse: Oregon, Washington
- 13) Columbia & LW Rivers below Portland: Oregon & Washington
- 14) Columbia River at the mouth: Oregon, Washington
- 15) Columbia River Coal Export Channel: Oregon, Washington
- 16) John Day Lock & Dam: Oregon, Washington
- 17) Lower Columbia River Basin Bank Prot.: Oregon, Washington
- 18) McNary Lock & Dam: Oregon, Washington
- 19) McNary Lock & Dam 2nd Powerhouse: Oregon, Washington
- 20) Lower Snake River Fish & wildlife Compensation: Washington, Oregon, Idaho
- 21) Little River Inlet: North Carolina, South Carolina
- 22) Richard B. Russell Dam: Georgia, South Carolina

ADDITIONAL PREPARED STATEMENTS SUBMITTED FOR THE RECORD

Chairman HATFIELD. Before we conclude these hearings with public witnesses, I would like to include in the record several additional prepared statements that have been sent to the subcommittee.

I regret that, because of the conflicts and scheduling problems, we have been forced to reduce the size of these nondepartmental hearings. So, without objection, the record will remain open for 10 days to 2 weeks so that any other statements can be included.

I also want to mention that the subcommittee hopes to have a separate day of public witness testimony on energy programs and projects later on. When that is finalized, we will be in touch with those who have requested an opportunity to testify.

The additional statements that are received by the subcommittee will be made part of the record at this point.

[The statements follow:]

STATEMENT OF RON DE LUGO, DELEGATE, VIRGIN ISLANDS

Mr. Chairman and members of the Committee, I appreciate this opportunity to offer my suggestions on the Corps of Engineers' budget for Fiscal Year 1983 as it affects my district, the U. S. Virgin Islands. Unlike some witnesses that appear before your subcommittee, my testimony differs in that I am not here with "a hand full of 'gimme' and a mouth full of 'much obliged'". In fact, of the three projects that I would like to bring to your attention, there is one that I would be happy for this Committee to take back. The three projects that I wish to review with you are two flood control projects, one called Savin Gut in Charlotte Amalie, St. Thomas, the other at Estate Mon Bijou in Christiansted, St. Croix and the the Puerto Rico-Virgin Islands Pipeline Study.

The final Detailed Project Report (DPR) recommending improvements to Savin Gut, a natural channel, to reduce flooding of the Jane E. Tuitt School and the business district of Charlotte Amalie south of Back Street is expected to be released shortly. These improvements are expected to include the construction of a concrete lined covered channel and bids are expected to be solicited as early as August. The benefit-cost ratio for this project is an impressive 15.2 with the total estimated cost at \$5 million. If I could be certain that everything would run on schedule with this project, I would not trouble this Committee by bringing it to your attention. While construction is anticipated to begin in September, I fear that there could be some unexpected delay and it would fall victim to the Corps' policy of no new starts for Fiscal 1983. I would hope that this Committee would agree with me that this project is too important to lapse under such circumstances. Capability for this project is projected at \$1.5 million for the coming fiscal year and I request that you provide a line item for it in the Corps' budget.

The Estate Mon Bijou DPR has just begun with the awarding of a contract for the photogrammetric mapping of the study area. Preliminary studies have indicated that an economically justified solution to flooding problems in this populous area does exist with an estimated cost of about \$2 million. Completion of the DPR with the benefit/economic feasibility determination for project construction will be accomplished in the coming fiscal year. So many people on St. Croix are affected year after year by floods in this area that I hope this Committee will help them by keeping this project on track. Capability for FY 1983 is \$128,000 and report language directing the Corps to continue to regard this as a high priority item would ensure a prompt solution.

Lastly, I break tradition by asking this Committee to provide no funds for a particular project in my area. That project is the Puerto Rico-Virgin Islands Pipeline Study for which the Corps has requested \$147,000. Originally, planners once envisioned the construction of a system whereby water would be collected and stored in eastern Puerto Rico for eventual piping to St. Thomas. At the time, we were indeed barging water from Puerto Rico to St. Thomas to meet our water needs. Since then, we have constructed desalination plants in the Virgin Islands which, thankfully, more than meet our current needs. I therefore request that this Committee apply these funds to a more worthwhile project such as those previously mentioned in my testimony.

Should the Chairman or any members of this Committee have any further questions concerning these projects or wish to view our needs first hand, I would be honored to be your host. Our community welcomes you and appeals for your help in these matters.

STATEMENT OF THE AMERICAN PUBLIC POWER ASSOCIATION

The American Public Power Association (APPA), the national service organization representing more than 1,750 local publicly owned electric utilities throughout the United States, submits this statement to the Energy and Water Development Subcommittee of the Senate Appropriations Committee in support of certain energy budget requests for Fiscal Year 1983.

Specifically, this statement concerns the following FY 1983 budget requests:

Federal Energy Regulatory Commission -- \$92.5 million
Army Corps of Engineers -- \$2.7 billion
Federal Power Marketing Administrations -- \$256.9 million
Bureau of Reclamation -- \$108.8 million
Clinch River Breeder Reactor -- \$252.5 million
High-Temperature Gas-Cooled Reactor -- \$40 million

FEDERAL ENERGY REGULATORY COMMISSION

APPA supports the Federal Energy Regulatory Commission's (FERC) budget request for FY 1983 of \$92.5 million. APPA is particularly interested in the amount requested for hydropower regulation, which is \$23.2 million, and the amount requested for electric power regulation, which is \$19.6 million.

To offset its appropriations request, the Commission has proposed raising its filing fees and user charges to recover nearly 45 percent of the budget. It is estimated that the Commission would recover \$30 to \$40 million the first year. The current level of fees totals about 30 percent of FERC's appropriations. Present fees collected by the Commission are about \$23 million, primarily in the area of hydropower licensing.

FERC has submitted draft legislation to Congress to make clear its authority to recover a greater share of costs through annual charges and user fees from entities under its jurisdiction. Before user fee increases are authorized, APPA feels that more information is needed on the actual increases which will be imposed on entities under FERC's jurisdiction.

Currently, FERC uses a "sharing of the net benefits" method for charging for the use of a federal dam by a nonfederal entity. Under this method, the fee is determined to be one-half of the difference between the cost of developing the hydro facility at the federal dam and the cost of obtaining power from the least expensive alternative source.

APPA has objected to this method of calculating the fee because it costs the federal government nothing to allow a federal dam to be used by a nonfederal entity. The nonfederal entity pays for construction and related development costs of the hydro facility. Because of these facts, APPA feels that only a nominal amount should be charged for the use of a federal dam. We urge Congress to assess the increased charges FERC wants in order to assure that such charges are not excessive.

Hydropower Regulation. There has been a tremendous increase in hydroelectric permit and license applications at FERC. For example, in FY 1978, the Commission received only 36 preliminary permit applications, while in FY 1981 the Commission received 1,856. For the first quarter of FY 1982, 332 permits were filed. In the area of hydro license applications, 63 were filed in FY 1980, and the Commission expects about 580 in FY 1983. APPA applauds the manner in which FERC has responded to the increased workload, and supports the budget request of \$23.2 million as necessary to keep up with incoming applications.

In order to reduce the Commission's hydro workload, FERC has submitted draft legislation introduced by Senator McClure, S. 1299, which would exempt nonfederal hydroelectric projects up to 15 mw from FERC license requirements. APPA strongly disagrees with this approach.

Under the Federal Power Act, Congress endorsed the theory that hydroelectric capacity should be developed in the public interest. For that reason, Congress granted preference to state and local governments in obtaining licenses and permits. The Federal Power Act also provided that licenses would not be issued in perpetuity, nor would they be granted without charge.

The hydro exemption legislation would eliminate all of these concepts which have been the core of the country's water development policy for the last 60 years. If there are any benefits from the exemption, they are short-term, and would be outweighed by the long-term harm of placing a valuable national resource up for grabs.

As an alternative to exemption legislation, APPA supports one-stop licensing for hydroelectric projects, proposed by FERC Commissioner Georgiana Sheldon. Such legislation would speed up and simplify hydro licensing by eliminating overlapping and conflicting authorities, and by consolidating final decision-making authority for all matters concerning hydro power licensing in FERC. At the present time, there are more than

20 statutes administered by several different federal agencies which affect the licensing of hydroelectric projects. Agencies responsible for administering these statutes frequently demand that any license issued by FERC be subject to conditions which they recommend, whether or not such conditions are acceptable to FERC. These demands result in negotiations between FERC and the various agencies which are time-consuming and are inconsistent with the original intent of Congress which was to provide the Commission with primary responsibility for licensing projects.

Although this committee does not have jurisdiction over either the exemption or one-stop licensing provisions, APPA comments on both, since these proposals have been mentioned in connection with appropriations testimony.

The hydro division is also responsible for approving the power and transmission rates developed by all the federal power marketing agencies. As this subcommittee is aware, there are three power marketing agency rate actions which have been pending before FERC for several years. Since 1979, 25 rate actions have been submitted to FERC. The Commission has acted on only 15. The length of time for completed actions ranged from five months to as long as 34 months. APPA urges this subcommittee, as part of its oversight function, to make it clear to FERC that a procedure must be established to approve or disapprove rate changes in a timely manner and to stress that FERC must perform its rate functions in an effective and efficient manner.

Electric Power Regulation. FERC has requested \$19.6 million for electric power regulation. A large number of public power systems buy wholesale power from private power companies which they distribute to their retail customers. Almost 900 public power systems buy part or all their power requirements from investor owned utilities. The rates charged by the private power companies for this wholesale power are regulated by FERC. As of March 1, 1982, wholesale rate cases pending before the Commission number 170. Obviously, the length of time that it takes FERC to determine whether a rate charged by a wholesale supplier is just and reasonable affects the economic health of many public power systems.

In addition to wholesale rate regulation, the Commission's responsibilities in the electric power area were significantly increased under the Public Utility Regulatory Policies Act of 1978 (PURPA).

The Electric Power Regulation section also collects information on the electric utility industry which is important to publicly owned systems, members of Congress, regulatory bodies and the public at large. Privately owned utilities file a Form 1 with FERC, while municipally owned systems file a Form 1-M. Information collected includes financial and operating expenses, individual utility figures on generating capacity, kWh sales, customers, revenues, electric operation and maintenance expenses as well as balance sheets and income accounts.

In the last year, FERC has reduced the amount of information investor owned utilities must disclose on their annual Form 1 report. There were 34 significant deletions, including information on investments, deferred income taxes, receivables from associated companies, sales of electricity, expenditures for certain civic, political and related activities, and charges for outside professional and other consultative services.

Such information is obviously important for public participation in regulation proceedings so that there is accurate and complete information on which to base judgments concerning rates.

The information collected by FERC is published by the Energy Information Administration in Statistics of Privately Owned Electric Utilities, Statistics of Publicly Owned Electric Utilities, and Typical Electric Bills.

Only the federal government has the resources to collect this type of information in an objective manner which will allow utilities, businesses and individual consumers to compare and evaluate the performance of various electric utilities. APPA urges this subcommittee to provide sufficient funds in the FERC budget to allow it to continue to collect this energy data.

APPA recommends a funding level which will allow FERC to carry out its wholesale rate regulation, PURPA responsibilities, and energy information collection.

CORPS OF ENGINEERS

The Corps has not requested funds for construction of new power projects in FY 1983. Their FY 1983 budget request is \$2.7 billion. APPA supports the Corps budget request for general investigations, continuing construction, and operation and maintenance of hydropower projects. APPA feels that funds for power projects are one of the country's most worthwhile and cost-effective investments, since these projects will help reduce our dependence on foreign oil, and money budgeted for power will be returned to the Treasury through the sale of electricity.

Specific Corps Projects Supported by APPA

Libby Additional Units, Montana -- The Corps has requested \$10.2 million in the 1983 budget for work on four additional units at the main Libby Dam, located on the Kootenai River in Montana. The project will provide 420 MW of capacity, would save the equivalent of 3 million barrels of oil a year, and would supply needed peaking power for the northwest. The Corps did not request funds for the reregulating dam, downstream from the main dam, pending reauthorization by Congress. Startup of all four generating units is expected by May, 1994.

Harry S. Truman Dam and Reservoir, Missouri -- The Corps has requested \$9.8 million for construction, and \$3.6 million for operation and maintenance for the Harry S. Truman Dam and Reservoir located on the Osage River in Missouri. This is a 160 MW project which is 89 percent completed. Its completion date is September, 1985.

Richard B. Russell Dam, Georgia -- The Corps has requested \$70 million for this 300 MW installation located on the Savannah River, which will help meet the increased power requirements of the Southeast. An additional \$334,000 is requested for operation and maintenance. Areas to be served by the project include all of South Carolina, North Carolina, Georgia, Alabama, and parts of Mississippi and Florida. The first power on line is expected in 1984. The dam is 70 percent completed.

Chief Joseph Additional Units, Washington -- The Corps has requested \$16 million for FY 1983 for work on 11 additional units with a capacity of 968 MW at the dam located on the Columbia River 51 miles downstream from the Grand Coulee Dam. The entire project is scheduled to be completed in September, 1986. These additions provide essential power needed by the federal systems to serve the electric requirements of the region.

New Melones Lake, California -- The Corps has requested \$5.5 million for FY 1983 for advancing construction of this 300 MW capacity plant. The project, located on the Stanislaus River, will provide needed power to the San Joaquin Valley. The project is scheduled for completion September, 1985. Power has been on line since April, 1979.

Bonneville Second Powerhouse, Oregon and Washington -- The Corps has requested \$26.4 million for FY 1983 for continued construction of the 558.2 MW capacity, eight-unit second powerhouse located on the Columbia River. The entire project is scheduled to be completed in June, 1984. The project is now 85 percent completed.

McNary Lock and Dam Second Powerhouse, Oregon and Washington -- The Corps has requested \$1.8 million for continued surveys for a proposed six-unit, 742 MW capacity second powerhouse. Funds would be used to refine the planning and engineering studies, and project cost estimates. These studies are scheduled to be completed in December, 1983.

FEDERAL POWER MARKETING ADMINISTRATIONS

APPA supports the FY 1983 budget requests of \$256.9 million for the four power marketing administrations. The budget includes \$2.8 million for the Alaska Power Administration; \$11.8 million for the Southeastern Power Administration; \$34.3 million for the Southwestern Power Administration; and \$208 million for the Western Area Power Administration. The fifth power marketing administration, Bonneville, requires no appropriations since it operates on a self-financing revolving fund basis. Under the Pacific Northwest Electric Power Planning and Conservation Act (P.L. 96-501), Bonneville is required to consider conservation as a priority resource. The FY 1983 budget includes a request that the \$1.25 billion increase in outstanding borrowing authority authorized in P.L. 96-501 for conservation and renewable loans and grants be made available. Future policies of the five power marketing agencies will continue to have a significant impact on public power systems. These power marketing agencies sell power from 122 federally owned water projects in 33 states to nearly 500 public agencies. The power marketing agencies give preference to public bodies in the sale of federal power. In supplying low-cost power to publicly owned electric utilities, these marketing agencies help them compete with large privately owned utilities, and the subsequent lower rates of public power systems serve as a yardstick in measuring the higher rates of private utilities.

This fiscal year, all five power marketing administrations will market about 151 billion kilowatt hours, and revenues are expected to be \$2,933 million. It is important to note that the power marketing administrations make more than they request in appropriations. Revenues from the sale of power and transmission services repay the capital investment and interest on the projects, and offset annual operations and maintenance costs. The federal power marketing administrations play an important role in the area of energy delivery. Their requests are reasonable and should be appropriated for FY 1983.

DEPARTMENT OF THE INTERIOR'S BUREAU OF RECLAMATION

The Bureau of Reclamation constructs and operates facilities to irrigate land and furnish water to 17 western states. Some of these projects produce power which is marketed by the federal power marketing administrations. APPA supports the \$108.8 million budget request of the Bureau which is directly related to hydropower. It represents 11.6 percent of the Bureau's budget request.

NUCLEAR

APPA urges that the subcommittee provide the full budget request of \$252.5 million for the Clinch River breeder reactor demonstration project, assuming the construction schedule contemplated by the Administration can be realized. Proof-testing of the breeder concept by building this plant on the system of the Tennessee Valley Authority is a logical and necessary step in evaluating this energy option. A successful breeder would, in effect, create a new "renewable resource" for the United States through stretching availability of finite uranium supplies by centuries. APPA also urges appropriation of \$40 million for the High-Temperature Gas-Cooled Reactor program. The High-Temperature Gas-Cooled Reactor has advantages over the pressurized and boiling light water reactors currently in commercial use in the United States, including potential cogeneration and process heat utilization; enhanced safety, licensing, and investment protection; minimal environmental impact; lower operation and maintenance costs; and improved fuel cycle efficiency.

STATEMENT OF DR. JOHN D. REICHERT, DEPARTMENT OF ELECTRICAL ENGINEERING,
TEXAS TECH UNIVERSITY

Mr. Chairman, during my verbal testimony before the subcommittee on April 1, 1982 I received permission to enter more extensive comments into the record. This privilege allows a more complete response to the USD OE report of March 18, 1982 to the committee, entitled "5 Mw_e Crosbyton Solar Hybrid Electric Power Project Reports". The USD OE report presented "the Department's assessment and intended actions" as required by H.R.4144, House Report 97-177.

I had hoped to be able to report to this committee on the progress that we were making on solar bowl technology with the \$4M that was appropriated for the program for FY 82. As you are aware, these funds have not been made available to Texas Tech, and progress has slowed considerably since completion of the Preliminary Design in the fall of 1982.

For FY 82 the \$4M authorized and appropriated by Congress provided for sufficient funds that the identified high risk/high payoff technology issues could be studied. This Congressional action imposed proper funding limits on the development of the solar gridiron concept and properly delayed decision on power plant construction. Today I am asking for your assistance in getting the \$4M for FY 82 "released" and for \$1M of FY 83 funds, so that the Crosbyton Solar Power Project (CSPP) may proceed with the identified R&D technology development for the Solar Bowl Concept.

The delay in the release of the \$4M has made it very hard to keep our program alive. April 1, 1982 marked the midpoint of the fiscal year. Since this fiscal year began, we have managed to conduct six more months of daily operation of the largest primary solar collector ever built, have accumulated thereby another six months of system level experience and of daily operation of the only high temperature solar boiler under control in the world, and have exhibited the system to another 3000 visitors. This achievement was possible because the USD OE did not send a stop-work directive and we stretched

out the available funds. This situation can not continue much longer. In fact, by May 1, 1982 all available funds will be totally consumed and irreversible steps must be taken.

At the end of my testimony, I will present a brief outline of the \$4M (FY 82) + \$1M (FY 83) program and how it advances the state-of-the-art and the knowledge and commercial acceptance of the solar bowl concept. First, however, I would like to comment on the March 18, 1982 technical evaluation and cost potential report prepared by USDOE for the House Appropriations Committee.

As an opening comment on the USDOE Report, I should say that I found it hard to identify specifically what USDOE recommends to do to advance the state-of-the-art. They do recommend that the \$4M be spent, but on what and by whom, I'm not sure. Furthermore, I found conclusions and information presented in the main text to be different, at least in degree, from that presented in the Appendix. The overall tone and conclusions of this report should be recognized as extremely unfriendly toward the solar bowl technology and toward the program conducted by Texas Tech University.

As a starting point, it is appropriate to state our objective at Texas Tech. The ultimate objective of the program at Texas Tech has always been to develop solar technology that will produce electricity from the sun at a scalable power plant size (1 MW up) at the lowest possible cost per kilowatt produced. Solar-electric conversion definitely works. The reason that such technology has not been deployed is that it has not been proven to be cost competitive. We believe that, on a large scale, the solar bowl concept can produce the cheapest electricity from the sun, because the capital and operating cost of such a power plant will be less, for an equivalent amount of electricity, than for any other solar-electric concept. We continue to state it emphatically: efficiency of solar collection is not the bottom line of solar engineering! The price of the solar electricity produced is the bottom line.

The solar bowl concept was selected by Texas Tech in 1974 over all other concepts (dish, trough, tower-heliostats, photovoltaics, - - -) because we believed that the price of electricity would be significantly less. We also believed, and this part has certainly been confirmed to date, that the R&D and "proof" of technology costs would be significantly less than for the others. We were well aware that some of the concepts considered were (potentially) able to operate at somewhat higher "aperture-area-to-electricity efficiency" than the solar bowls. The overriding fact, however, is that the final business

decision (and hence nationwide utilization) depends on cost-of-product, rather than collection efficiency. All work to date on the solar bowl — and, for that matter, on the other concepts — has confirmed our choice for the purpose of producing low cost electricity!

For simplicity in discussing the USDOE report, I will mention a "60-to-1 majority vote effect". Texas Tech has received \$6M to date for the development of solar gridiron technology and has no complaint about the amount. We did have to struggle to obtain access to these funds; we were glad to get them; and I believe we provided full measure of value for the investment. It may be true that this total funding has served as a limiter, as a governor on speed of development. I think not, but USDOE appears to disagree in the report (p. 5). The point is that about 60 times as much funding (i.e., approximately \$360M) has been deployed by USDOE into its "higher priority" competing technologies, primarily into the tower-heliostat technology. This disproportion itself has not hurt or impeded development of solar bowl technology; it is simply a manifestation of USDOE priority policy.

The USDOE report, however, attempts to "pickup their priority policy by its own bootstraps". The mere fact that USDOE has vigorously acted on some priority list does not, of itself, justify the priority list. Whether or not their priorities are reasonable, it is certainly unreasonable to constitute a committee of those receiving the \$360M to decide if the \$360M was appreciated and wisely prioritized with respect to those at the \$6M end of the list. Such "internal" self-justification can be a powerful weapon for perpetuation, but there must be a check to the process somewhere. I call up one example from the USDOE report (pp. 5-6):

"Because the proposed project threatens to usurp funds which may be available for higher priority endeavors, it enjoys the strong opposition of the Solar Thermal Energy Association, as well as other groups that have been constituted to advise the DOE on priorities."

Neither the House Appropriations Committee nor the Crosbyton Solar Power Project has any voice concerning the priorities advised by these beneficiaries of USDOE funding and priority policy. Contrary to the USDOE statement, the Crosbyton Solar Power Project does not "enjoy" this situation. I raise here a conflict-of-reason issue, if not conflict-of-interest.

During my verbal testimony I used the analogy that an overripe banana might attract 60 times as many fruit flies as an apple. Nevertheless, the apple may be better to eat tomorrow! The opportunity to continue the development of solar gridiron technology may turn out to depend on USDOE pollstering

of 60-to-1 votes. This committee will decide the matter. It can be stated, however, that good engineering and arithmetic are not dependent on 60-to-1 votes! Neither is the price to be paid for solar electricity.

Specific Comments on the USDOE Report

1) Efficiency Comparisons. The report places great emphasis on efficiency. As I stated above, other concepts may be shown to deliver greater collection efficiency. One should note, however, that the "calculated" efficiencies are different in each of the various reports cited by USDOE. Furthermore, except for the solar bowl concept, efficiencies have not been measured over any period of time by large scale experiments. [The trough technology, listed as one of the four generic concepts (p. 1) is not, in fact, a competitor for solar-thermal electric power. The operating temperatures are too low. Whether there are 3 or 4 competitors, it is completely inappropriate to then rank the solar bowl as 7th and 5th (Table I, p. 3, Appendix).]

After all the report discussion, the report gives the summary paragraph (p. 4):

"Nevertheless, the results of the independent comparative analyses must be regarded as inconclusive, since they were based on designs that lacked maturity and for which there was not adequate detail from which to base firm cost estimates."

Is "inconclusive" the best that can be done with a 60-to-1 vote? The three cited studies could not agree on the efficiency. It was not pointed out by USDOE that none of these studies considered the present conception presented by CSPP in 1981 for the Preliminary Design. [All of these references are studies performed at least two and a half years ago, at least two years before the CSPP Preliminary Design.] Furthermore, these studies were indeed based on designs (never proposed by CSPP) which lacked maturity and adequate detail. For example one of these studies used oil as the working fluid and another, some kind of sludge. The SERI study assumed operating temperatures under 800°F, whereas the CSPP has always used about 1000°F (and has exhibited 1000°F daily at the ADVS for 26 months). One of these studies costed a bowl made entirely of concrete! The most polite summary is that the studies are "inconclusive", just as USDOE admitted.

2) Cost Considerations. The point made earlier about cost of electricity being the bottom line should be recalled. During the last three years the CSPP has directed strongest effort to reducing the price of electricity, not to

maximizing the efficiency (although we have done well on efficiency). Although efficiency is always of interest, there are limits to our opportunities for efficiency improvements. People buy electricity, not efficiency. [Photosynthesis is only 2% efficient, but rabbits eat grass because they can afford to.]

For the other technologies, the costs used by USDOE and those conducting its comparative studies are usually goals or targets. The CSPP has the only cost receipts from actually building a large scale system, unless USDOE comes forward with receipts from the Barstow construction. Cost analysis conducted with the goals set by proponents is more circular reasoning, another "bootstrap" effort. During the past three years, the CSPP has made substantial progress in cost reduction (e.g., the superpanel idea mentioned in the USDOE report). The competing technologies have simply not made corresponding improvements and differ little today from initial conceptions!

3) Design Improvements. Contrary to USDOE implication, it is not intended that design improvements be incorporated into a power plant without ADVS (Analog Design Verification System) testing and performance confirmation. This is much of what the \$4M + \$1M budget addresses! From the work accomplished to date, we believe that we have eliminated all apparent technical disadvantages by developing and testing components and subsystems. For example, the Hot Spot problem has been solved with aluminum honeycomb core panels. Panels of the new design have been exposed to hot spots in simulated equipment failures for over 40 times without any harm or degradation. Previous designs would show some harm after 3 to 5 simulated equipment failures.

4) Hybrid Power Plants. The USDOE report states (p. 5): "In relation to the capabilities of the technology for fossil fuel displacement, the fossil hybrid concept is without merit." By a 60-to-1 majority vote, however, the USDOE presently advocates its Repowering Program (retrofit hybridization with fossil fuel). We are primordial advocates of hybrid plants. If a 30-35% penetration of the fossil fuel during a typical demand day does not have strong merit, then what does. USDOE appears to require that our technology, and ours alone, provide 100% solar electricity (or extreme values like the Barstow plant). The gimmick here is that 100% displacement is possible only at an initial capital increase of 200-400% (by adding extra collectors and a large storage system). This does not have merit to me at the present time.

5) Plant Cost. The USDOE reports an independent cost study conducted by

A. T. Kearney, Inc. of Chicago/New York. USDOE reveals that the Kearney estimate confirms that provided by Texas Tech, \$35M, but then things get strange. By using an escalated contingency, USDOE arrives at the number, \$45.1M, and proceeds to double this to \$90.2M (p. 3). USDOE claims 100% cost overruns for their other projects. Obviously, the CSPP is not included in that experience, because we have always come in within estimated cost. [This is, in part, how we have survived the first six months of FY 82.] I would hope that this statement is not what USDOE feels its real capabilities are. It is bad enough when others say such things about USDOE. It is outrageous for USDOE to tout it! I suspect the Kearney folks are as surprised at the USDOE reporting of their findings as we are. They, of course, were independent, so I can not speak for them.

6) Technology Cost Comparison. Appendix Table II of the report should immediately arouse the reader's alertness. Obviously something is wrong with the "so-called" Texas Tech number of \$435/m² invented there. The answer, of course, is that totally different scenarios and cost categories are used for the various lines in the table. If the same trick were applied to the Barstow project, so sheltered by USDOE, one would show "studies" projecting the Barstow collector panels at about \$100/m² and an actual experienced cost of over \$1000/m². Would this be a hint of an overrun in the Barstow project? It is impossible to fix Table II; it should be abolished.

7) Mirror Panel Pricing. The report states that the CSPP claims a 25% lower mirror panel cost than they quote from their Barstow vendor. This shows lack of USDOE understanding of production techniques and costs. We have visited that vendor's facilities twice (during production) and his personnel have visited our facilities twice (during operation). The vendor did not experience level cost. We were interested in his prices and costs for the last mirror panels produced. USDOE is apparently interested in the average cost of all panels produced, rather than carrying forward a learning curve experience.

8) University Role. I take strong exception to the implied conclusion of the USDOE report that Texas Tech and other universities can not establish a management structure that can run a large scale experiment with appropriate industrial support. Organizations and companies don't run programs — people do! We have had the people with the experience and capabilities to run this program under contract at Texas Tech. University personnel across this nation

have demonstrated successful conduct of large scale experiments and projects. Looking at manifest USDOE priorities, I wonder: "Is it Texas Tech or USDOE that resembles an Ivory Tower?"

9) Series vs. Parallel Development/Industrial Participation. The series versus parallel approach to engineering and technology development is another example of USDOE's 60-to-1 voting. A series development is traditionally used when available funding is very limited. It also has organizational and program logic advantages appreciated by Texas Tech. Because of limited opportunity for funding, Texas Tech recommended a series approach in its original sole source, unsolicited program proposal to the ERDA in 1975. In a series or "iteration" approach, the engineering is performed in a sequence of "generations" of design for an overall target application. Realism and direction have always been kept foremost in the R&D conducted by the CSPP by focusing on a 5MWe power plant application.

The Crosbyton program has now developed the solar gridiron concept to the point where a Preliminary Design for a complete 5MWe solar-fossil fuel hybrid electric power plant has been completed and delivered (along with justified performance projections) to the USDOE. This effort completed the fourth generation of conceptual design for high temperature solar gridiron application. The ADVS (Analog Design Verification System), operated for the first time on January 23, 1980 at Crosbyton, Texas, exemplified and tested the second generation of design conception. The changes from generation to generation have resulted from increased experience with the basic concept and understanding of how the cost of systems might be reduced.

The USDOE, under its priorities, has never provided enough funding to its Solar Bowl Program to allow for parallel development approaches. Thus there has only been one project, the CSPP, in the Program, and the CSPP has had to proceed with iterated development. The other competing technologies, programmatically defined by the USDOE headquarters, have proceeded with parallel development strategies (for a total of \$360M) instead of the more cost effective (total of \$6M) engineering strategy permitted for the gridiron technology.

Under parallel development approaches conceptions, possible applications, and components are simultaneously developed by groups of "competing" companies and institutions. USDOE can now claim that 20 to 30 times (but not 60) as many companies are "interested" in the other solar technologies

than in the solar gridiron systems. Texas Tech has contracted for industrial support primarily with only two companies: E-Systems of Garland, Texas and Foster-Wheeler Energy Corp. of Livingston, New Jersey. Glitsch, Inc. of Dallas, Texas and H. C. Lewis Construction Co. of Lubbock, Texas have also been involved in the essential work of the CSPP program.

In the USDOE report, the very cost effectiveness of the approach permitted the CSPP is turned around and advertised as a fault. USDOE tries to make this point at the bottom of Page 4, on Page 5, and at places on Page 6. From Page 5, for example:

In short, the context in which the project has been forced to proceed has precluded the programmatic and technical interplay typical of successful federally-funded solar thermal R&D programs.

In this statement, the USDOE would appear to regret that such small funding has been provided for the gridiron technology. I personally believe that it has been adequate for the purpose. Since USDOE wishes us to be compared to "successful federally-funded solar thermal R&D programs", I would believe, without being impudent, that I had a right to know just which programs they mean. I need some example; are they referring to USDOE programs?

It should be made very clear that the time does come in a technology development program when broad "technical interplay" is very useful. The Crosbyton Solar Power Project has reached such a point. As the discussion of budget below indicates, the \$4M + \$1M will include parallel efforts by other industrial subcontractors, completing the final definition of some of the solar components. USDOE has not recognized this timing: we now, after four generations of overall conception, need to obtain better definition of the solar components. Suddenly USDOE fails, in our case, to understand "technical interplay". I can assure USDOE that some of their industrial vendors and contractors appreciate the cross-relevance of their developing components to the solar gridiron technology. We have been contacted by a great many who are willing and anxious to participate in further development of mirror panel technology, control systems, and on and on. We wish to quit squabbling and get on with it.

10) High-Risk/High-Payoff. The USDOE report states on Page 5: "The project as advocated clearly conflicts with guidance to proceed with high-risk, high-payoff research endeavors." Goodness, we are the very "dark horse" orphan technology which ERDA/USDOE has always called high-risk and unlikely. USDOE just does not recognize what high-payoff means. The

high-payoff of the solar bowl technology must come not in the performance (efficiency), but in the cost of solar electricity. The high pay-off comes if solar can indeed be used to replace some fossil fuel to provide electricity that consumers can afford. The high-risk is that the design approaches and design features may not serve up to expectation in reducing potential system cost. At the present time, the solar gridiron concept, as engineered by the CSPP, is already able to offer the lowest potential electricity cost of all the competing solar concepts, but the outstanding issue is whether such electricity can be delivered at a price consumers can afford.

It is not necessary at the present time for the federal government to make a final decision on whether or how to build a solar gridiron power plant. Texas Tech will continue, with the \$4M + \$1M, to add realism by focusing on such a plant as a target. Whether or not such a plant is actually built totally or in part by the federal government, the \$4M appropriated for FY82 is needed to develop the technology. The good news remains: the activities to be conducted with FY 82 and FY 83 funds are such that the cost will subtract directly from the \$35M cost estimate (was included in the estimate) made by Texas Tech. The bad news is that the CSPP has received no FY 82 funding to date.

Budget for the \$4M (FY 82) and the \$1M (FY 82)

Mr. Chairman, some confusion has apparently arisen as to the intended purpose of the \$4M appropriated for FY 82. USDOE has been so busy assuring various parties that it did not advocate or request this \$4M originally, that it has done little to reduce the confusion. The funds were, indeed, authorized and appropriated by the Congress without request from USDOE. The \$4M has been described by Congress and by Texas Tech as relevant to the \$35M cost of a possible solar power plant at Crosbyton, Texas. With a multiple year funding schedule in hand, the Congress decided to fund the first \$4M (FY 82) and decided properly to delay decision on whether to actually build the power plant (follow with a \$15M installment). The "initial \$4M" is in fact necessary technology development required for (and before) a large plant. Whether or not the Congress elects to proceed with the plant at a later time, the technology development requires the research work. Because one-half of FY 82 is now lost, Texas Tech is not seeking \$15M from FY 83 funds and is not seeking final decision on an actual power plant at the present time.

The funding to date, for the Crosbyton Solar Power Project has culminated in the construction and operation of the Analog Design Verification System (ADVS) and the Preliminary Design of a 5MWe Power Plant at Crosbyton, Texas. The project is now ready for the next phase which is the detail design, manufacture, and proof testing of the new critical solar subsystem elements that have been developed in the preliminary design. It is not appropriate (or possible with the funding requested) to begin construction of a power plant. However, it is still our ultimate objective to build a 5MWe power plant at some time in the future. The \$5M total budget shown will advance the state-of-the-art of solar bowl technology by addressing the high-risk and high-payoff solar bowl features that remain. This work needs to be accomplished before construction of a power plant can be considered.

There are six work areas proposed for the \$4M + \$1M effort. These are:

(1) Engineering Design. The preliminary design of the complete 5MWe power plant has been completed and from this design it can be seen that the fossil-fuel and steam electric generation portions are straightforward and conventional technology. The critical design features that must be further defined are those associated with the solar components. These items will have, by far, the most impact on the construction cost, and additional design work is required to verify construction and erection techniques and costs. For adequate cost estimates detailed designs of the solar components/subsystems are required. These designs will support the claim that the solar bowl concept can be constructed and operated cheaper than any other high temperature solar-electric approach.

(2) Solar Receiver/Boiler. The preliminary design of the 20 tube solar receiver/boiler is identical in concept to the present 2 tube ADVS solar boiler. The significant technological problems associated with the manufacture of these boilers for the 200 foot diameter solar bowls are in the machine tooling and in the stress relief during the fabrication process and in installation of sensors. These appear to be readily solvable problems. However, since a couple of the steps and the size of the boiler are beyond the present experience, there is some question as to the final cost and quality of each boiler.

The initial work under this area will be to perform the final design of the machine tooling, fabricate/assemble the tooling, and check out the operation of the tooling. This will be followed by the design and

fabrication of a full diameter (18") short segment (8 to 10 feet) of the solar boiler. This segment will be tested at the fabricator's site for high pressure and water-steam temperature cycling. After these initial tests the boiler segment can be subjected to a series of water-steam cycle tests at an existing solar test facility in which the boiler will be subjected to the intensity that it will experience in the 200 foot diameter bowl. Once the designed performance parameters have been confirmed, the segment will be subjected to an over-design environment and off-design operating conditions in order to characterize the physical phenomena associated with failure. This last test is important because no boiler designed for this system has ever failed in test or operation.

After the in-factory testing is completed, a full-size production model solar receiver will be fabricated in order to confirm and fully characterize the fabrication procedure and to establish the production costs. This receiver will be tested by simulating the temperature cycle as nearly as possible.

(3) Mirror Panels. The mirror panel design concept selected in the preliminary design uses paper honeycomb. From on-going tests, at the ADVS, of a couple of aluminum honeycomb mirror panels, it appears that this metal support material has a superior heat transfer capability which minimizes the possible problem of "hot spot" damage to the mirror surface. There are four to five vendors who have been active in the area of solar panel manufacture and who could, with adjustments/modifications to their present production systems and approach, accommodate the 4' x 5' panels required of the 5MWe power plant. These companies may be interested in: developing a design, providing panels for testing at TTU and the ADVS site, designing a mirror panel production facility with related equipment, and defining the production steps and sequences required.

It is intended that this task be multi-award and phased. Two or more manufacturers willing to supply information and panels would be selected by competition to provide designs and mirror panels for ADVS testing and superpanel installation. Up to two manufacturers with the better performing mirrors and low production cost would be selected to perform the last phase of this area: the facility design and production definition.

(4) Superpanels. The single most important concept incorporated into the proposed bowl design, from the point of view of keeping the construction costs from escalating, is that of the superpanel. Superpanel structural

rigidity, mirror alignment, and mirror motion during superpanel installation have only been estimated. These factors affect construction, operation, and maintenance costs and should be confirmed before a full commitment is made on the 5MWe plant. Mirror panels manufactured in the third area will be installed in at least two superpanels with shape and bowl placement extremes. The actual steps of on-site final superpanel assembling, mirror attachment, alignment, and simulated superpanel installation will be performed in the field, evaluated, and adjusted as necessary during this task so that "production line" procedures can be established that will handle the 440 superpanels that must be installed for the 5MWe plant.

(5) Control System. The control system that is to be used follows directly from that presently on the ADVS, but, of course, is much more complicated. The control system computer program must be written, debugged, and checked-out in various simulated operational modes. Much of this work can be accomplished using on-hand computer components and systems. However, because of the uniqueness and complexity of the control system for the 5MWe plant, certain computer equipment and components must be purchased in order for the control software program to be prepared and evaluated. The software package is one of the critical items required for the unique control of a solar hybrid plant. This task will involve the specifications and purchase of the necessary computer components/systems and the preparation of the software package. The software will be written during the FY 82-83 period. However, the program will be "exercised" and "proofed" in the '83 time frame.

(6) ADVS and Management Operations. There is on-going mirror panel performance testing at the ADVS that will be continued during this contract. In addition, ADVS-size mirror panel cleaning and hot spot protection systems will be fabricated; installed, and evaluated on the ADVS. These tests will confirm the proposed design and allow for debugging and possible problem solving/modifications at the ADVS reduced size. The ADVS has operated for over two years using the "temporary-short term" solar boiler which had a few months life expectancy. The "planned" ADVS boiler of an improved design, material, and instrumentation is still in its shipping crate at the site. This boiler will be installed and operated, and the boiler presently being used will be removed, inspected, fully evaluated, and be subjected to a planned test to destruction to establish possible failure modes. An adequate number of new aluminum honeycomb mirrors

will be manufactured for lifetime testing in the ADVS from the winning contractors for the 5MWe plant mirror panel effort.

Texas Tech University will provide overall management, direction, coordination and control of the work performed under all of these tasks. The contract final report will include complete description and documentation on all activities.

The following comments are applicable to the proposed work:

(1) Areas (1) through (5) will primarily be accomplished by sub-contact using multi-source procurements and multiawards to the maximum extent possible in keeping with program cost minimization.

(2) The proposed work can be accomplished in an 18-20 month period.

(3) All work leads toward, and directly contributes to, the 5MWe power plant; and yet does not involve on-site construction type work. There will be no unfinished hardware items that would require additional funding in future years. The full size hardware items (that are fabricated, tested, and evaluated) will be of the same design and material as for the proposed plant and therefore will represent real costs.

(4) The budget is as shown on the attached page.

Budget for FY 82 and FY 83 Work of the
Crosbyton Solar Power Project

	FY 82	FY 83
1. Engineering Design	\$ 900 K	\$ 50 K
2. Solar Receiver	500 K	200 K
3. Mirror Panels	650 K	250 K
4. Superpanels	400 K	200 K
5. Control System	650 K	50 K
6. ADVS Operation and Management	<u>900 K</u>	<u>250 K</u>
TOTAL	\$4000 K	\$1000 K

Proposal For Work to Be Performed
with FY 82 and FY 83 Funds on the
Crosbyton Solar Power Project

The \$4M of FY 82 funds appropriated for the Crosbyton Solar Power Project has been described by Congress and by Texas Tech as relevant to the \$35M cost of a possible solar power plant at Crosbyton, Texas. With a multiple year funding schedule in hand, the Congress decided to fund the first \$4M (FY 82) and decided properly to delay decision on whether to actually build the power plant (follow with a \$15M installment). The "initial \$4M" is in fact necessary technology development required for (and before) a large plant. Whether or not the Congress elects to proceed with the plant at a later time, the technology development requires the research work. Because one-half of FY 82 is now lost, Texas Tech is not seeking \$15M from FY 83 funds and is not seeking final decision on an actual power plant at the present time. Rather, Texas Tech is requesting release of the \$4M of FY 82 funds plus an additional \$1M to be provided from FY 83 funds.

The funding to date, for the Crosbyton Solar Power Project has culminated in the construction and operation of the Analog Design Verification System (ADVS) and the Preliminary Design of a 5MWe Power Plant at Crosbyton, Texas. The project is now ready for the next phase which is the detail design, manufacture, and proof testing of the new critical solar subsystem elements that have been developed in the preliminary design. It is not appropriate (or possible with the funding requested) to begin construction of a power plant. However, it is still our ultimate objective to build a 5MWe power plant at some time in the future. The \$5M total budget shown will advance the state-of-the-art of solar bowl technology by addressing the high-risk and high-payoff solar bowl features that remain. This work needs to be accomplished before construction of a power plant can be considered.

There are six work areas proposed for the \$4M + \$1M effort. These are:

(1) Engineering Design. The preliminary design of the complete 5MWe power plant has been completed and from this design it can be seen that the fossil-fuel and steam electric generation portions are straightforward and conventional technology. The critical design features that must be further defined are those associated with the solar components.

These items will have, by far, the most impact on the construction cost, and additional design work is required to verify construction and erection techniques and costs. For adequate cost estimates detailed designs of the solar components/subsystems are required. These designs will support the claim that the solar bowl concept can be constructed and operated cheaper than any other high temperature solar-electric approach.

(2) Solar Receiver/Boiler. The preliminary design of the 20 tube solar receiver/boiler is identical in concept to the present 2 tube ADVS solar boiler. The significant technological problems associated with the manufacture of these boilers for the 200 foot diameter solar bowls are in the machine tooling and in the stress relief during the fabrication process and in installation of sensors. These appear to be readily solvable problems. However, since a couple of the steps and the size of the boiler are beyond the present experience, there is some question as to the final cost and quality of each boiler.

The initial work under this area will be to perform the final design of the machine tooling, fabricate/assemble the tooling, and check out the operation of the tooling. This will be followed by the design and fabrication of a full diameter (18") short segment (8 to 10 feet) of the solar boiler. This segment will be tested at the fabricator's site for high pressure and water-steam temperature cycling. After these initial tests the boiler segment can be subjected to a series of water-steam cycle tests at an existing solar test facility in which the boiler will be subjected to the intensity that it will experience in the 200 foot diameter bowl. Once the designed performance parameters have been confirmed, the segment will be subjected to an over-design environment and off-design operating conditions in order to characterize the physical phenomena associated with failure. This last test is important because no boiler designed for this system has ever failed in test or operation.

After the in-factory testing is completed, a full-size production model solar receiver will be fabricated in order to confirm and fully characterize the fabrication procedure and to establish the production costs. This receiver will be tested by simulating the temperature cycle as nearly as possible.

(3) Mirror Panels. The mirror panel design concept selected in the preliminary design uses paper honeycomb. From on-going tests, at the ADVS, of a couple of aluminum honeycomb mirror panels, it appears that this metal support material has a superior heat transfer capability which minimizes the possible problem of "hot spot" damage to the mirror surface. There are four to five vendors who have been active in the area of solar panel manufacture and who could, with adjustments/modifications to their present production systems and approach, accommodate the 4' x 5' panels required of the 5MWe power plant. These companies may be interested in: developing a design, providing panels for testing at ITU and the ADVS site, designing a mirror panel production facility with related equipment, and defining the production steps and sequences required.

It is intended that this task be multi-award and phased. Two or more manufacturers willing to supply information and panels would be selected by competition to provide designs and mirror panels for ADVS testing and superpanel installation. Up to two manufacturers with the better performing mirrors and low production cost would be selected to perform the last phase of this area: the facility design and production definition.

(4) Superpanels. The single most important concept incorporated into the proposed bowl design, from the point of view of keeping the construction costs from escalating, is that of the superpanel. Superpanel structural rigidity, mirror alignment, and mirror motion during superpanel installation have only been estimated. These factors affect construction, operation, and maintenance costs and should be confirmed before a full commitment is made on the 5MWe plant. Mirror panels manufactured in the third area will be installed in at least two superpanels with shape and bowl placement extremes. The actual steps of on-site final superpanel assembling, mirror attachment, alignment, and simulated superpanel installation will be performed in the field, evaluated, and adjusted as necessary during this task so that "production line" procedures can be established that will handle the 440 superpanels that must be installed for the 5MWe plant.

(5) Control System. The control system that is to be used follows directly from that presently on the ADVS, but, of course, is much more

complicated. The control system computer program must be written, debugged, and checked-out in various simulated operational modes. Much of this work can be accomplished using on-hand computer components and systems. However, because of the uniqueness and complexity of the control system for the BWw plant, certain computer equipment and components must be purchased in order for the control software program to be prepared and evaluated. The software package is one of the critical items required for the unique control of a solar hybrid plant. This task will involve the specifications and purchase of the necessary computer components/systems and the preparation of the software package. The software will be written during the FY 82-83 period. However, the program will be "exercised" and "proofed" in the '83 time frame.

(6) ADVS and Management Operations. There is on-going mirror panel performance testing at the ADVS that will be continued during this contract. In addition, ADVS-size mirror panel cleaning and hot spot protection systems will be fabricated; installed, and evaluated on the ADVS. These tests will confirm the proposed design and allow for debugging and possible problem solving/modifications at the ADVS reduced size. The ADVS has operated for over two years using the "temporary-short term" solar boiler which had a few months life expectancy. The "planned" ADVS boiler of an improved design, material, and instrumentation is still in its shipping crate at the site. This boiler will be installed and operated, and the boiler presently being used will be removed, inspected, fully evaluated, and be subjected to a planned test to destruction to establish possible failure modes. An adequate number of new aluminum honeycomb mirrors will be manufactured for lifetime testing in the ADVS from the winning contractors for the BWw plant mirror panel effort.

Texas Tech University will provide overall management, direction, coordination and control of the work performed under all of these tasks. The contract final report will include complete description and documentation on all activities.

The following comments are applicable to the proposed work:

(1) Areas (1) through (5) will primarily be accomplished by sub-contact using multi-source procurements and multiawards to the maximum extent possible in keeping with program cost minimization.

(2) The proposed work can be accomplished in an 18-20 month period.

(3) All work leads toward, and directly contributes to, the 5MWe power plant; and yet does not involve on-site construction type work. There will be no unfinished hardware items that would require additional funding in future years. The full size hardware items (that are fabricated, tested, and evaluated) will be of the same design and material as for the proposed plant and therefore will represent real costs.

(4) The budget is as shown on the attached page.

Budget for FY 82 and FY 83 Work of the
Crosbyton Solar Power Project

	FY 82	FY 83
1. Engineering Design	\$ 900 K	\$ 50 K
2. Solar Receiver	500 K	200 K
3. Mirror Panels	650 K	250 K
4. Superpanels	400 K	200 K
5. Control System	650 K	50 K
6. ADVS Operation and Management	<u>900 K</u>	<u>250 K</u>
 TOTAL	 \$4000 K	 \$1000 K

STATEMENT OF MORGAN D. DUBROW, SENIOR STAFF ENGINEER, NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

Mr. Chairman, my name is Morgan D. Dubrow. I am Senior Staff Engineer of the National Rural Electric Cooperative Association (NRECA). NRECA is the national trade association of about 1000 rural cooperatives which supply central station electricity to some 25 million people in the rural areas of 46 states. Consumer demand for electricity in the agricultural areas of the nation last year increased by about 1 percent. Many of our member systems experienced reduced growth in kilowatthour use in 1981, in large part due to conservation, the increased costs of electricity, and a decline in business activity. However, our cooperatives had an increase in peak demand, the highest in history.

NRECA supports the FY 1983 budget request for the Corps of Engineers, the Bureau of Reclamation, Department of Energy's power marketing agencies, the Federal Energy Regulatory Commission and other energy programs including solar, fossil, conservation and renewable energy sources. We also support DOE's nuclear programs for safety, breeder reactors, away-from-reactor fuel storage, completing the fuel cycle and reprocessing nuclear fuel, high temperature gas reactors and the Clinch River Breeder Reactor Demonstration Plant. NRECA emphasizes the need for:

- o Restoring \$150.0 million for O&M for water resources projects
- o \$48.0 million for new construction starts of the Corps of Engineers and the Bureau of Reclamation
- o \$70.0 million for the Richard B. Russell Dam
- o \$10.0 million for Libby Dam
- o \$14.0 million (\$10.0 million program adjustment) for Garrison Irrigation Project
- o \$12.7 million for Fryingpan-Arkansas Project
- o \$5.0 million for Auburn-Folsom Project
- o \$161.0 million for Central Arizona Project
- o \$89.6 million for the Bonneville Unit in Utah
- o \$1.9 million for the Wind-Hydroelectric Energy Project
- o \$4.3 million for Atmospheric Water Resource Management
- o \$830.0 million for the nuclear program including \$252.0 million for the Clinch River Breeder Reactor
- o \$40.0 million for the high temperature gas reactor, \$5.0 million for the HTGR Program and \$10.0 million for Barnwell
- o \$23.2 million for the Division of Hydro Power Licensing at the Federal Energy Regulatory Commission

Restoration of Funding for Water Resource Projects

At our 40th annual meeting in Atlanta, February 10, 1982, our members again unanimously passed resolutions opposing the reduction and elimination of appropriations for a number of water resource and hydroelectric projects throughout the United States. NRECA encourages the Congress to fund such worthwhile studies as the hydro potential of the Red River Waterway in Louisiana, the McClellan-Kerr Waterway in Arkansas and Oklahoma, and the Upper Mississippi River. We are concerned about the Administration's efforts to abrogate the Federal Government's responsibilities for the operation and maintenance of our water resource projects and ports by shifting the cost to the water users in such an untimely fashion. Specifically, we request restoration of the \$150.0 million needed to carry out the Corps of Engineers' maintenance program for these facilities.

New Construction Starts

NRECA will support a proposed amendment of the FY 83 budget to provide \$48.0 million for various new construction starts by the Bureau of Reclamation and the Corps of Engineers. Our members unanimously adopted resolutions expressing their willingness to work with the Administration in providing new hydroelectric facilities by entering into joint financial ventures with the states and local entities. By this means, our country can resume needed water resource development.

Wind-Hydroelectric Energy Project

We support \$1.9 million needed to perform the verification installation of a 4 MW and the 2.5 wind turbines at Medicine Bow, Wyoming. Preliminary studies show that the concepts are feasible and funds should be provided to complete the installation and operation of both of these units.

Atmospheric Water Resource Management

We support the FY 1983 \$4.3 million request to continue Projects Sky Water, a practical cloud seeding technology being developed by the Bureau of Reclamation to increase water supplies for both short and long term water requirements in the arid West.

Libby Dam

We support the FY 83 request of \$10 million to complete the continued work on the Libby Powerhouse. We hope there will be a resolution of the problem of authorization of Libby Re-regulation Dam so that Units 6 - 8 of 315 MW can be installed at Libby and 88 MW at Libby Re-regulation.

Richard B. Russell Dam

Funds in the amount of \$70.0 million should be appropriated in FY 83 for continued construction of the Richard B. Russell Dam Project on the Savannah River between Georgia and South Carolina. It will provide 300 MW of needed base load hydroelectric power and 300 MW of pumpback units, thereby increasing the power plant capacity to 600 MW.

Garrison Irrigation Project

The Bureau of Reclamation received \$4.0 million in FY 82 to maintain the Garrison Irrigation Project. We urge the Committee to provide \$4.0 million in new funds in FY 83 to the Bureau of Reclamation for the project. A total of \$14.0 million is needed to allow the Bureau to work at its full capability; the additional \$10.0 million for work on Garrison can be obtained from a program adjustment. This development is consistent with our commitments to Canada.

Fryingpan-Arkansas Project

We support the appropriation of \$12.7 million in FY 83 for the Bureau of Reclamation to continue work on the Fryingpan-Arkansas Project, including Mt. Elbert pumped storage power plant facilities, municipal water, and fish and wildlife.

Auburn-Folsom South Unit (CVP)

We support the appropriation of \$5.0 million in FY 83 for the Auburn-Folsom South Unit which has a potential of 700 MW of hydroelectric power (300 MW hydroelectric and 400 MW pumpback). We urge the Committee to request a timely completion of studies so that in the near future the Bureau of Reclamation can go forward with this important project.

Central Arizona Project

We urge the Committee to appropriate \$161.0 million required in FY 83 to continue the orderly construction of the Central Arizona Project which is vital to the water supply for the State of Arizona. This would provide for the delivery of water to Phoenix and Tucson as scheduled.

Bonneville Unit, Central Utah Project

We request that the Committee appropriate \$89.6 million in FY 83 for construction of the Bonneville Unit of the Central Utah Project which has a potential of 144 MW of hydroelectric power.

Columbia Basin and Other Pacific Northwest Projects

We support \$31.6 million for the Third Powerhouse at Grand Coulee including 100 MW of pumpback generating units, \$16.0 million for Chief Joseph and power plant additions, and \$26.4 million for the Second Power Plant at Bonneville.

Federal Power Marketing Agencies

NRECA supports the \$257.0 million FY 83 appropriation request for Federal power marketing agencies: \$208.0 million for the Western Area Power Administration, \$12.0 million for the Southeastern Power Administration, \$34.0 million for the Southwestern Power Administration, \$3.0 million for the Alaska Power Administration, and \$650,000 for DOE's Office of Power Marketing. We also support the Bonneville Power Administration (BPA) budget funded through its self-financing revolving fund procedures. We suggest that similar revolving funds for the other marketing agencies would be desirable and we support proper legislation to achieve this end.

We again commend the five power marketing agencies for a job well done. We also note that all funds, both appropriated and from BPA's revolving fund,

are fully reimbursable to the Treasury and that these agencies have actively pursued a policy to establish rates at a level that covers costs and meets repayment schedules.

I am still concerned because the Western Area Power Administration has been understaffed to carry out its full responsibilities. Western's staff should be increased by about 200 people to better carry out its power marketing responsibilities.

Federal Energy Regulatory Commission

We support both the \$23.2 million FY 83 budget request and the staffing for the Division of Hydro Power Licensing of the Office of Electric Power Regulation. The Committee is aware of the tremendous increase in their work load. We also support one-step licensing, with FERC acting as the lead agency which will accelerate development of hydroelectric power.

Support for Nuclear Programs

NRECA supports the FY 83 budget request of \$830.0 million for the nuclear program. We are pleased that this request represents an increase over last year because these funds are vitally needed if we are to help meet our power needs. We urge the Committee to provide all the funds requested and especially wish to support the following programs:

- o \$578.0 million for breeder reactor systems including \$252.0 million for the Clinch River Breeder Reactor
- o \$32.0 million for converter reactor systems
- o \$80.0 million for the commercial nuclear waste
- o \$59.0 million for nuclear fuel cycle
(includes \$10.0 million for Barnwell)
- o \$50.0 million for remedial action program

We also support restoration of the High Temperature Gas-Cooled Reactor (HTGR) program at the Department of Energy recommended level of \$40.0 million and \$3.0 million for the HTGR Recycle Program. This advanced reactor system is supported by many public and private utilities and rural electric cooperatives through an organization known as Gas-Cooled Reactor Associates. Several utilities have expressed interest in owning and operating the Lead Plant HTGR, an 1100-MW electric cogeneration system which will be completed by 1994. We further request restoration of the away-from-reactor (AFR) program which has been dropped by the Administration.

We appreciate this opportunity to express our views.

STATEMENT OF CITIZENS FOR GAULEY RIVER, WEST VIRGINIA

Thank you very much for permitting us the opportunity to submit this testimony for the record. We hope that in enacting appropriations legislation for the Corps of Engineers for the forthcoming fiscal year, the Committee will see fit to include in that legislation, or in the legislative history, instructions to the Corps of Engineers which reflects our recommendations.

CITIZENS FOR GAULEY RIVER is a coalition of West Virginian sportsmen including hikers, fishermen, backpackers, rafters (both private and commercial), kayakers, canoeists, hunters and others, who use, enjoy and appreciate the Gauley River and are concerned with the responsible management of the river and the wild lands through which it flows.

Our purpose in submitting this testimony is to request that in enacting legislation appropriating funds for the operation of the Summersville Dam in West Virginia by the Corps of Engineers, the Committee include in that legislation or in the accompanying committee report, instructions to the Corps which will provide for the enhancement of commercial and non-commercial whitewater recreation on the Gauley River below the Dam.

Our proposal is entirely consistent with the authorized project purposes. For many years, in fact, in carrying out the authorized purposes of this project, the Corps has released water from the dam which is suitable for whitewater recre-

ation downstream. However, the Corps has not made an effort to maximize the local economic benefits which could result from various different release patterns which are available to the Corps under the present authorization. We would like to suggest a release pattern which would be fully consistent with the authorized project purposes, would be very desirable from the point of view of both commercial and non-commercial whitewater recreation interests, and would greatly benefit the local economy.

Our proposal is to provide weekend flow rates which are acceptable for commercial rafting and which have a high dependability so that trips can be scheduled in advance. At present, commercial rafting is limited when the reservoir is at summer pool levels. Providing flow rates in accordance with this proposal would have a potential local economic benefit in the range of \$2,000,000 to \$3,000,000 (in addition to the approximately \$2,600,000 already being generated by commercial rafting) due to an estimated increase of 12,000 commercial rafting user days. The proposal would not affect the present authorized project purposes of flood control, low flow augmentation, and flat water recreation on the reservoir.

DISCUSSION

In order to plan or schedule a whitewater river trip on the Gauley River, private boaters and commercial rafters alike require that acceptable river flows of at least 2200 cubic feet per second (cfs) have a high probability of occurring. Presently, acceptable flows on the Gauley below Summersville Dam occur only 20% of the time between May and July. During the Fall, acceptable flows are provided with a high probability because the lake is being drawn down by the Corps of Engineers for winter flood control.

While the 20% Spring/Summer flows are not reliable enough to attract boaters, the Fall drawdown does bring commercial and private visitors from all over the Eastern United States, who come to experience the unique and famous whitewater of the river. In 1980, these visitors amounted to an estimated 15,000 commercial and private user-days. Visitation is growing each year with the increased popularity of the sport and is expected to continue to expand.

Basically, this proposal calls for acceptable weekend whitewater releases during the May-July period when Summersville is at summer pool level. The key elements of the plan are:

1. Minimum whitewater releases of 2200 cfs will be provided from the dam on Saturdays and Sundays during the May-July period. The releases will last 7 hours, plus 1 hour to stage the release up and 1 hour to stage it down.
2. Some of the stored water in the reservoir will be released along with reservoir inflow on the weekends to insure a dam outflow suitable for whitewater recreation. The use of some of the stored water will lower the reservoir level slightly.
3. The stored water released from the reservoir during the weekend will be replaced by keeping dam outflows at a level slightly below reservoir inflows on weekdays.
4. The typical change in the reservoir pool level resulting from a whitewater release will be 6 inches. The maximum possible change will be 10 inches. These changes are of the same magnitude as the present monthly summer pool level changes reported in USGS records.

The proposed plan is possible for two principle reasons. First, the reservoir at summer pool has a large storage capacity. A stored water release of 1000 cfs, for one hour along with the inflowing water will lower the reservoir water surface level by only 0.345 inches. As a consequence, if the reservoir inflow is 1200 cfs, a one-day minimum whitewater release (7 hours at 2200 cfs, plus one hour to stage up and one hour to stage down) will lower the reservoir surface level by only 2.76 inches.

Second, the average reservoir inflows are of sufficient magnitude to replace the released water without significantly affecting the downstream environment. The monthly average reservoir inflows for May, June and July are 2,116, 1,997 and 1,929 cfs, respectively. A 6-inch reduction in the reservoir level on Sunday afternoon can be replaced by slightly reducing the dam outflow during the following week.

FEASIBILITY STUDY

To determine the feasibility of providing flow releases designed to enhance whitewater recreation, a test management plan was simulated using 14 years of Gauley River flow data. The parameters for this simulated management plan were as follows:

Minimum whitewater releases were scheduled for a two-day raft trip (first day rafting the upper section, camping on the river overnight, second day rafting the lower section). The Saturday release started at 8 am, with full flow at 9 am (one hour to stage up), retained full flow until 4 pm, and staged the flow down to 200 cfs below reservoir inflow at 5 pm. The Sunday release started at 6 am, with full flow at 7 am, retained full flow until 2 pm, and staged the flow down to 200 cfs below inflow at 3 pm. The earlier starting time for the Sunday release was necessary so that flows could reach the beginning of the lower section by 10 to 11 am. Dam outflow was retained at 200 cfs below inflow until either (1) the stored water used for the release was replenished, or (2) the inflow went below 400 cfs. When the inflow was less than 400 cfs, 200 cfs was still released from the dam. If inflow became less than 200 cfs, dam outflow was equal to inflow. Weekend releases were cancelled if either (1) the reservoir inflow on Friday was less than 400 cfs, or (2) low flow augmentation for the Kanawha River was required.

Daily inflows into the reservoir were computed from the product of measured USGS flow data at Craigsville, WV and a proportion based on reservoir drainage area versus the Craigsville drainage area (weekends were identified in the data).

RESULTS

Using the 14 years of available data, a total of 213 weekends (426 weekend days) were examined. Following the parameters of the simulated management plan, 30 weekend releases were cancelled due to low river flows. Three weekends had flows higher than 6000 cfs. In addition 7 weekends had one day with flows higher than 6000 cfs. As a consequence, 83% of the weekend days examined had flows acceptable for whitewater rafting. Twelve of the weekends cancelled due to low flows occurred in two years that were exceptionally dry.

When the average reservoir inflow during the weekend is between 750 and 2500 cfs, the whitewater releases lower the reservoir surface level 6 inches or less by Sunday. In the study, this would have occurred on 31 weekends. When the average inflow is less than 750 cfs, surface level is lowered between 6 and 10 inches. This would have occurred on 32 weekends.

DIRECT ECONOMIC BENEFITS

In 1980, it is estimated that approximately 500 people went down the Gauley per day with commercial rafting companies during the 3-week fall draw-down period. At an average of \$50/day in guide fees, this represents a direct economic benefit of \$525,000. In addition to guide fees, studies¹ indicate that commercial rafting customers spend an average of approximately \$40/day on food, lodging, transportation, etc., representing an additional direct benefit of \$420,000. This proposal would add another 10,000-12,000 user-days to the commercial rafting season, more than doubling the amounts mentioned above.

INDIRECT ECONOMIC BENEFITS

Expenditures by out-of-area visitors constitute an exported good or service because they represent "new" dollars brought into the community. The effect of this "new" money on businesses within the community is further expenditures to purchase the goods and services of other firms, and so on. The indirect economic impact of non-resident expenditures is calculated using a business activity multiplier. A study by McKean et al. (1977) of sportsman expenditures in Grand

1. "The 1980 Colorado Whitewater Boating Use and Economic Impact Study," prepared by Patrick Tierney, Associate Planner, Environmental Research + Technology, Inc. Dec. 1980, 23 ps.

County, Colorado, showed that one dollar of export spending resulted in an overall impact of \$2.61 to the community.

Since most commercial rafting customers are from outside the Summersville area, the 1980 direct expenditures of nearly \$1 million can be multiplied by \$2.61 to give a total economic benefit to the community from whitewater boating in that year of \$2,610,000. By more than doubling the number of commercial visitor-days, the proposed plan would also at least double the economic benefits to the community from \$2,610,000 to more than \$5 million. And these figures do not include the additional economic benefits generated by private boaters who must also purchase food, lodging, gasoline, etc.

CONCLUSION

The dam on the Gauley River at Summersville can be operated to provide adequate and reliable flows for commercial and private recreational boating without affecting the present project purposes of low flow augmentation, recreation on the reservoir and flood control. Operation of the dam in the manner suggested by the feasibility study would provide from 10,000-12,000 additional visitor days to the area and an estimated \$2,000,000-\$3,000,000 in additional local economic benefits.

STATEMENT OF JACK BOYD, MEMBER, UPPER HUMBOLDT WATER USERS ASSOCIATION NEVADA

Mr. Chairman, my name is Jack Boyd, and I am a member of the Upper Humboldt Water Users Association (the "Association"). The Association is composed of ranchers and property owners who reside near the Humboldt River and its tributaries in and around Elko, Nevada. These ranchers and landowners are located above and below the proposed dam and reservoir project. The Association, together with the Nevada Cattlemen's Association, the Nevada Farm Bureau, the Nevada Wool Growers Association, the Nevada Association of Conservation Districts, and the Pershing County Water and Conservation District, an organization which represents all water users on the Humboldt River below Rye Patch Reservoir, opposes the further funding, study and proposed construction of the Humboldt River and Tributaries Project. Although the Project is not specifically included in the Fiscal Year 1983 Budget sent to Congress by the President, the Association appears here today to seek to dissuade this Committee from making its own appropriation. More important, the Association would like to take this opportunity to urge consideration of legislation to deauthorize the Humboldt Project.

Over the years a number of Association members have appeared before this Committee to reiterate our opposition to the proposed dam and reservoir. Since many of our numerous objections have already been submitted into your records, I will focus my testimony on a few specific objections.

1. Objection to Further Appropriations for Planning

The Association objects to any further appropriations for the Project until the Corps has completed and publicly released its final Phase I General Design Memorandum (GDM). Two years ago the Corps was appropriated \$300,000 in planning monies for the Phase I GDM. At that time, the Corps represented that this amount

would be sufficient to cover the cost of the GDM's completion, then scheduled for December 1981. Last year the Corps received an additional \$150,000 in monies from "available Corps funds" to complete the Design Memorandum. The December 1981 completion date has passed, but the Sacramento District advises us that a draft GDM has not yet been prepared and that no new completion date has been set.

We are anxiously awaiting Corps publication of its GDM, but based on our detailed analysis of Corps documents issued to date, the Association believes there is no economic justification for the Project and no need for further study and expenditures of public funds. Two of the three proposed reservoirs have already been deferred after 1978 economic studies by the Corps indicated that Vista and Devil's Gate Dams were not economically feasible. Our analyses shows that using a proper cost-benefit analysis, the proposed Hylton Dam is not economically feasible either. The Association believes it wasteful and improper to continue this piecemeal, but ultimately costly, funding of project planning, particularly in light of project deficiencies and the Corps' apparent failure to complete the Phase I GDM with FY 1981 and FY 1982 appropriations as promised.

2. Project Threatens a Profitable Ranching and Agricultural Economy

Hay and pastureland productivity in the Humboldt Basin is dependent upon natural flooding that the proposed Project would curtail. Agricultural economic analyses and field studies conducted by the Max G. Fleischman College of Agriculture at the University of Nevada-Reno clearly show that seasonal floods in the Basin increase yields per acre, increase total acreage irrigated and total acreage harvested, and increase net incomes of ranchers in comparison with "dry" or normal water years. Study results indicate irrigated land and forage production in the study area increased by 51% and 92%, respectively, due to natural flooding. These University findings conflict with the Corps' position that minor floods usually result in sedimentation and erosion damage which the Corps claims reduces yield per acre. In its analyses, the Corps has ignored beneficial impacts of natural flooding, specifically maintenance of soil salt balance and recharge of underground aquifers.

Adverse impacts of the proposed Project are not limited to ranching, but also extend to agricultural lands in the Lovelock Valley below Rye Patch Reservoir. In its comments on the Corps' 1981 Draft Environmental Assessment for the Humboldt Project, the U.S. Department of Interior's Water and Power Resources Service noted that "any worthwhile operation of an upstream reservoir will adversely affect the operation of Rye Patch Reservoir for irrigation and recreation." U.S. Geological Survey data indicate that, due to evaporative loss, reservoir storage results in substantial increases in salinity of downstream flow and reduces its suitability

for irrigation use. Given the large increase in salinity that already results from storage and regulation of the Humboldt River by Rye Patch Reservoir, the substantial increase in downstream salinity caused by the proposed Project would threaten both agriculture in the Lovelock Valley and habitat in the Humboldt Sink. The Corps' project analyses have thus far ignored the economic losses to Lovelock Valley agriculture caused by increased salinity of irrigation water, as well as those losses due to "clear water" irrigation, specifically reduced lengths of irrigation flows.

3. Recreation Benefits are Inflated

Recreation benefits the Corps attributes to the proposed reservoir have increased over the years as the Corps has sought further justification for a project unjustifiable on flood control and irrigation benefits alone. For example, the Corps increased its total initial recreation-use estimate at Hylton by 79% between 1976 and 1978. Use figures at present are grossly inflated and bear little relation to the actual use figures at several reservoirs in the same general region. In fact, the U.S. Water and Power Resources Service notes in a recent review of the Corps' Draft Environmental Assessment that the "initial use estimates of 478,000 recreation days annually are very high for a 2,600 acre surface area lake." The Service suggests a figure of 200,000-250,000 recreation days could be justified at Hylton, but adds that "large recreational use of remote areas is not likely in this region as much of the use is wildlife-oriented (i.e. fishing, hunting)." In view of the importance given wildlife-oriented recreation, it is interesting to note that the U.S. Fish and Wildlife Service in its 1982 Fish and Wildlife Coordination Act Report held that the proposed Project would adversely impact fish and wildlife resources at the reservoir site, along the South Fork and mainstream Humboldt River, at adjacent reservoirs and, most significantly, at the Humboldt Sink. Approximately a 10% reduction in game fish populations is estimated for Rye Patch Reservoir and a 50% reduction in wildlife carrying capacity is expected in the Humboldt River floodplain. While studies by the State of Nevada and the U.S. Water Resources Council indicate that currently existing recreation capacity satisfies Humboldt Basin's boating and fishing needs through the year 2020, the U.S. Fish and Wildlife Service notes that hunter-use demands for Humboldt Sink are increasing and will require improved wetland conditions and expanded wetland acreage if these demands are to be met. The Fish and Wildlife Service estimates 1,888 acres of wetland and 16.2% of total hunter days would be lost from the Humboldt Sink due to construction and operation of the Project as proposed.

4. Local Cost Share Manipulation

The Corps of Engineers, in consultation with the Project sponsor, is considering a reduction in the local share of irrigation costs to \$3,819,000 from \$6,500,000

or 60% of total irrigation first costs, a local cost share percentage set by authorizing legislation and confirmed by Corps headquarters in 1976 and 1978). In memoranda obtained through an FOIA request, the Corps Sacramento District and South Pacific Division offices acknowledge that the Project's sponsor cannot possibly pay the 60% share of irrigation costs, and, in fact, is unable to pay much more than \$2,762,000, or 60% of project costs allocated to irrigation in 1950.

The Corps latest attempt to reduce the local share of project cost assumes application of a newly-devised formula it claims is derived from the "Reclamation Law Process" of the 1940's and 50's. Although the Association can provide a critical analysis of the Corps' formula at the Committee's request, we will not go into detail at this time. We only cite the Corps' recent efforts in this regard as evidence of the degree to which the Corps of Engineers must go to keep the Humboldt Project afloat -- especially in the face of the Project sponsor's inability to pay the local share of project costs.

In this same vein, we conclude our testimony with a piece of information that has recently come to our attention (see attached newspaper article). As the article attached indicates, the proponents of Hylton Dam and Reservoir are apparently considering replacing the proposed Project with a smaller structure funded by the State of Nevada.

As noted today and in years past, the Humboldt River and Tributaries Project is vigorously opposed by the very individuals, the ranchers and property owners, who are, according to the Corps, its main beneficiaries. In view of this opposition and in the absence of evidential support for project benefits and local financial support for irrigation costs, the proposal should be abandoned without further expenditure of Federal funds.

The Association wishes to thank the Committee for this opportunity to appear here today. We also offer to the Committee any and all background information used in the preparation of this testimony, which, in the interest of space, is omitted or condensed in this statement.

[March 24, 1982, Elko (Nev.) Daily Free Press]

HUMBOLDT PROJECT TO BE LOCAL, STATE ENTERPRISE

Dale Porter, chairman of the Humboldt Project Committee, today outlined a major change in the concept of the project, which is aimed at building a dam and reservoir in the Elko area.

He said this change in concept will transform the effort into one aimed at providing a recreational reservoir on the South Fork of the Humboldt River as a state and local project, rather than as a federal undertaking.

Porter explained local residents have been striving for many years to achieve construction of one or more upstream storage dams on tributaries of the Humboldt under terms of congressional authorization enacted more than 30 years ago. During those years, he noted, agricultural interests have consistently withheld support for the project, and the federal authorization requires agricultural support for what was designated as a project to achieve flood control and agricultural benefits.

Members of the committee recently decided, Porter related, to refine the concept of the project in a manner that would remove federal participation and remove any benefits intended for agricultural interests.

The result, he explained, is to be a reservoir created strictly for recreational benefits, with no agricultural interests involved. He said preliminary study indicates such a dam and reservoir can be built within the framework of Nevada water law; and he speculated the cost for such a facility would be much lower than the larger and more complex structure anticipated by the federal authorization.

Those preliminary examinations indicate a dam site, not yet specifically designated, would be located on the South Fork a short distance upstream from the confluence of Ten Mile Creek. The site chosen for the proposed Hylton Dam on the South Fork would have been downstream from Ten Mile, Porter noted.

Joe Gomez, a consultant to the local committee, has been assigned to compile

data from the several studies of the proposed reservoir area conducted over the years by the U.S. Army Corps of Engineers. Porter noted all the information developed by the corps is available to Gomez and the committee, and the work already accomplished by corps studies is expected to minimize the amount of studying to be involved in the shift in concept for the South Fork project.

Porter pointed out specific details remain to be refined, but he explained he anticipates a lake comparable in size to Wilhorse Reservoir, a popular recreational site in northern Elko County. Access to the proposed reservoir would be by way of the Jiggs Highway, approximately 15 miles from Elko.

The newly adopted concept would create a reservoir that would be exclusively for recreational purposes, and it would be operated on a "water in, water out" basis so that downstream flows would be essentially unaffected by the existence of the proposed dam, Porter explained. Water rights acquired by the purchase of ranching property at the reservoir site would be more than adequate to offset evaporation loss, he added.

Porter noted that as Gomez proceeds with his studies, the committee intends to consider the feasibility of equipping the dam to generate electricity.

Gomez also will prepare cost estimates for reservoirs of various sizes, Porter said, and he speculated the scaled-down size of the project would be within the financial capability of the Elko County Recreation Board, with assistance from the state. He noted the last session of the state legislature adopted a law which allows the state to bond for participation in projects of this nature. The county fair and recreation board derives funding from a tax levied on local hotel and motel rooms.

Porter said it is impossible to specify a timetable until more details have been pinned down; but he commented he is hopeful the proposal can be taken to the state legislature next year and construction can start in 1984.

STATEMENT OF BERNARD S. LEE, PRESIDENT, INSTITUTE OF GAS TECHNOLOGY

My name is Bernard S. Lee. I am President of the Institute of Gas Technology, a not-for-profit energy R&D organization affiliated with Illinois Institute of Technology in Chicago. IGT has specialized in energy RD&D work and energy-related education programs for 40 years. I will provide you today with my assessment of the continuing energy RD&D needs of the nation.

In past years IGT appeared before Congress to offer progress reports on various research projects in which we were engaged. During the previous Administration our work on synthetic fuels technology received much encouragement. Congress strongly supported this energy technology development in response to the oil supply disruptions and price spikes in the 1970's.

Now, however, government energy policy is directed toward funding long-term high-risk research, with the expectation that private industry will start funding much energy RD&D that was formerly carried out by the Department of Energy. Government involvement will focus on the areas of basic science and applied research, leading toward, and perhaps including proof-of-concept. Process development and demonstration, which are the necessary precursors of commercialization, would be left to the private sector.

Our concern is for the preservation of the continuity of effort from laboratory or bench-scale through the larger process development units, pilot plants and then to the size required to assess commercial and technological feasibility. While I strongly support participation by private enterprise to the maximum extent possible in the development of new energy technologies, I believe we must be realistic about the need for government support of high-risk new technologies where the cost to get to commercial demonstration (even with tax incentives, loan guarantees, and price guarantees) is so high that few, if any, major companies can support such efforts.

We are also concerned that with diminished government support for energy research and development, especially development, an "energy technology gap" will be created. Reduced support of energy technology development for even a few years will surely result in the dissolution of centers of technical capability and the dispersal of highly qualified technical personnel to other endeavors. In that case, an entire new generation of technical and scientific personnel will have to be trained again and given sufficient practical experience before it can contribute to energy technology development programs. In short, an "energy technology gap" of at least a decade could result from the current, and in my view, short-sighted, thrust of the government's energy programs. The new technology necessary to meet future energy needs cannot be provided by turning energy RD&D on and off like a faucet in response to short-term fluctuations in world energy supplies and prices over which we have little, if any, control.

Although for the past two years the energy picture began to look brighter, this was due to the economic slow-down, the continued substitution of domestically produced energy for imported oil, and conservation due to the improvements in the efficiency of energy use. However, it would be foolish to allow these positive trends to lull us into complacency. First, demand reduction will not continue at the same rapid pace, because the more easily accomplished conservation measures have already been implemented. Further and sustained improvements will become more difficult. Second, although many users were able to substitute coal for oil, the next increment of coal substitution for imported oil will be more difficult and costly. Most importantly, any economic upturn, which is anticipated sometime this year, will immediately trigger increased energy demand.

On the supply side, despite recent heightened activity in oil and gas production, most of the drilling in the U.S. has been to increase production of established reservoirs rather than for new exploration. Although the decline in our oil reserves has leveled off, the stabilization of reserves estimates is due largely to a revision of estimates of previously discovered reserves. New discoveries were equivalent to only 29% of production in 1980. Although, undoubtedly, we do have substantial amounts of oil yet to be found, it is generally accepted that the potential for large-scale new discoveries is limited.

The stability of the present world oil market is itself a fragile thing that could be shattered overnight by any upheaval in the Middle East. Iran remains in the throes of political change and is still at war with Iraq. Further, one of the main motivations for OPEC's moderate attitude toward price is fear — fear that the West will finally develop alternative energy sources that could, if not put it out of business, at least act as a

constraint on its control of pricing. Sheik Yamani, the Saudi oil minister, is on record saying that "If we force the West to invest heavily in finding alternative sources of energy, they will. This would take no more than seven years and would result in reducing (The West's) dependence on oil as a source of energy to a point that would jeopardize Saudi Arabia's interest."

The current world oil "glut" should be regarded as a temporary respite, a breathing spell that gives us time to develop alternatives for the day when imported oil will not be available under acceptable conditions. We should keep in mind that it took an oil surplus of only 2 million barrels a day, less than 1.5% of the world's annual energy consumption, to transform the world oil market from a seller's to a buyer's market in 1981. The reverse could easily happen. The question that must be answered is how can we maintain secure and dependable energy supplies, both as an individual nation and as the leader of the free world. We must also recognize that we and our allies are on the downward slope of a rather severe recession, and another major upset in the world's oil supplies could have a much more severe impact than the upsets of 1973 and 1978.

I have always advocated letting free-market forces work. However, our free-market economy has never been totally free. We have a long tradition of peace-time public investment in those areas vital to our well-being, security and prestige as a nation. The national highway system, support for the farm industry, space programs and defense are national decisions which transcend the free market and must be undertaken by society as a whole.

Energy is so vital and so central to the power balance between the U.S. and U.S.S.R. and the economic stability of the world, that the Administration must place the same priority on energy as it does on defense. Therefore, insuring a commercial-scale capability for an adequate and secure energy supply outweighs all other considerations. National policy must establish energy as a high priority because the private sector can never factor national needs into investment decisions.

In joining with the gas industry to plan a minimum gas-related DOE FY'83 Budget recommendation, it became clear that there are specific areas where federal support is essential, but missing or inadequate in the Administration's FY'83 budget. IGT is actively engaged in the following program elements that are within this subcommittee's jurisdiction.

Unconventional Gas

During the past year IGT continued research on unconventional gas including field projects, laboratory research and analytical studies. The principal areas of work were determination of geopressured/geothermal aquifer gas content and production prospects, laboratory characterization of reservoir rock and stimulation procedures for gas production from tight sands and coal seams.

- IGT developed and utilized an accurate method of measuring natural gas produced with geopressured well water. Use of this method demonstrated higher gas production than anticipated in previous theoretical gas production studies. In one case an abandoned well, which had been judged a dry hole from conventional test procedures, produced so much natural gas that it is still in commercial production 17 months later.

In FY'83, \$16 million will be required to obtain additional basic technical information needed to assess the portion of geopressured aquifers capable of producing otherwise undiscoverable gas in excess of solubility in reservoir brine. Tests would be conducted on wells originally drilled in search of geothermal energy. Test equipment already in place at the geothermal well sites would be augmented with the unique instrumentation and analytical procedures developed by IGT.

Biomass

- With DOE funding, work on IGT RENGAS process (steam-oxygen gasification of forest and plant biomass materials for fuel) has proceeded from laboratory and bench scale studies to the design and construction of a process development unit (PDU). \$1 million is needed to support the operational phase which will provide better understanding of the relationship of biomass feed characteristics to fuel yields and provide the basis for long-term genetic development of feed stock species.
- The production of renewable energy from marine biomass is definitely a long-range supply option. While commercial production of kelp and seaweed is already underway

in Japan and China, the methods are very labor-intensive. A more technological approach to growth and harvesting would reduce costs and provide a suitable biomass feedstock for applications in the U.S. Marine biomass production is attractive because it can be done over a much wider area than for land-based biomass, and because marine biomass does not contain lignin and is readily biodegradable.

Digestion of biomass for energy production takes place in three essential steps: (1) hydrolysis and liquefaction, (2) fermentation to produce hydrogen, carbon dioxide and acetic acid, and (3) methanogenesis — the production of methane from the fermentation products. Through isolation and characterization of the key bacterial populations involved, it may be possible to develop special bacterial inocula to enhance and optimize reaction rates for each step, and to isolate the principal and most effective organisms.

\$2 million in FY'83 would permit continuation of preliminary work to develop a technological approach to growth and harvesting as well as basic genetic engineering research.

Storage

Our nation has come to rely upon fossil resources for its energy and fuels, and even today our economy is dependent on domestic and foreign supplies of fossil fuels. Nature's fossil deposits are inherently storable reservoirs of coal, oil and gas, and we use this quality of storability to provide ready reserves in times of high demand. These are the very reserves that we have been drawing upon for many past decades when their quantities were thought to be practically endless. Endless or not, it is now obvious that further increments in extraction or production will incur attendant cost increases.

As the prices for fossil fuels increase the economics of nuclear and renewable energy sources will continue to become more attractive. Nuclear heat or electricity, solar or wind energy and other renewable energy sources are not storable like fossil fuels are, and long-distance delivery of most renewable energy forms is impractical without conversion to electricity or to a chemical fuel. A dedicated research program can provide the solution to this storage and delivery problem for nuclear and renewable energy.

The need for energy storage exists if there is a mismatch between the times when energy is readily available and when it is to be used. In the past, the abundance of petroleum fuels and the ease with which they can be stored made the development of new technologies for storing energy relatively unimportant. Now, however, the need for reliable and cost-effective methods for storing energy is of critical importance. Energy storage can reduce the use of the petroleum fuels in a number of ways. Increased use of solar and wind energy is possible since storage permits continuous output from these intermittent sources. Waste heat from industrial processes can be recovered, stored, and then reused to improve process efficiency. If storage is used electric utilities can use more nuclear and coal-fired base-load generation instead of peaking turbines which burn oil. Another important possibility for using additional base-load is to charge batteries for electric vehicles. All of these storage options can assist in reducing fuel costs and obtaining energy self-sufficiency for the United States. It should be recognized that the mode of energy storage is quite dependent on the form in which the energy is to be delivered and utilized. Chemical, electrical, thermal and mechanical modes of storage all have their appropriate place in energy systems.

In the United States, about 15% of our annual consumption of natural gas, crude oil and refined products and 30% of our annual coal consumption are normally kept in storage. In order to meet the seasonal heating and cooling requirements in the U.S., 18 times more energy is needed in the winter than in the summer. In the Northeastern U.S. this factor increases to 90 times. The need for energy storage to meet large seasonal changes in energy demand is evident.

One thermochemical method of thermal energy storage (TES) for on-site commercial or industrial usage of heat energy is the use of melted salt or salt mixtures. Work began in March of 1981 at IGT on a three-year project under DOE sponsorship to develop an advanced energy storage system using molten carbonate salts. By proper selection of salt and ceramic materials to achieve chemical compatibility, concepts may be developed for a broad range of solar, industrial, utility and even residential applications spanning the significant temperature range of 200°C to 1200°C. In principle, this advanced technology may be implemented with different families of salts or salt mixtures with compatible low-cost ceramic materials and with numerous practical heat-exchange fluids.

Potential users that will benefit from these and other advanced heat storage concepts include many small industrial companies (ceramic tile, brick, metal heat treating, drying and curing operations) and residential/commercial users not having the financial resources required to develop high risk/high benefit technologies.

Small business engaged in high-temperature processing will need this technology to remain competitive in the future as fossil energy costs continue to escalate.

A broad-based generic R&D program is required to address the many applications and operating requirements as well as the many possible storage media configurations identified or thought to be possible. After sufficient research and technology development, industrial trade associations, TES user groups with comparable requirements and potential TES system manufacturers could be involved in transferring the technology to the commercial sector.

- The funding requirement in FY'83 for thermal energy storage RD&D based on molten salts is \$8.5 million and will permit the following work:
 - Measurement of physical and chemical properties of potential media materials.
 - Optimization of media thermal and physical behaviors within expected operating conditions.
 - Media selection/development to fit application temperatures and operating requirements.
 - Materials compatibility studies addressing media, containment, working fluids and auxiliary components.
 - Mathematical modeling of heat transfer performance and optimum integration into the heat-source/heat-use sequences.

Hydrogen

Nuclear heat or electricity, solar or wind energy and other renewable energy sources are not storable like fossil fuels, and long-distance delivery of most renewable energy forms is impractical without conversion to a chemical fuel form. A long-term solution to those problems is hydrogen. It can be produced with base-load (fossil, nuclear and solar) power stations, stored, and later utilized in both conventional (gas turbine) and advanced (fuel cell) electric power peaking generation equipment. Unlike batteries and mechanical storage devices such as flywheels, hydrogen can be stored for long durations without degradation of energy quality.

- However, before hydrogen can be economical as a fuel in the long-term, much advanced technology development is needed. IGT has been a leader in hydrogen research and recommends a period of sustained support with an FY'83 funding level of \$3 million in:
 - experimental work on thermochemical and photochemical conversion of solar energy to hydrogen.
 - fundamental studies of catalytic (flameless) combustion of hydrogen.

This program could lead to a revolutionary way of utilizing a fuel gas that would not be dependent on fossil resources. Hydrogen can provide an energy delivery bridge between today's fuels and tomorrow's nuclear, solar and renewable energy sources. Hydrogen fuel does not involve carbon sources or carbon dioxide as a combustion product, and many concerns about quality of our atmosphere would be alleviated if hydrogen were to become widespread in use.

In summary, sustained research and development programs to assure a continuing flow of improvements and innovations to utilize indigenous fossil and renewable energy resources, and development of advanced methods of energy storage would be the most effective insurance the nation can provide against oil-related economic disruption.

Thank you for this opportunity to present my views.

STATEMENT OF MELVIN J. REBHOLZ, ACTING DIRECTOR, OHIO DEPARTMENT OF
NATURAL RESOURCES

After reviewing the President's proposed budget for FY '85, we noted a number of projects which in our judgment deserve this subcommittee's special attention. These projects are listed as follows:

Gallinolis Locks and Dam Modernization Project - \$1.4 million has been included in the proposed FY '83 budget for this extremely important project to continue with advanced engineering and design. We strongly recommend approval of the proposed funding.

Emsworth, Dashields and Montgomery Locks and Dam Study - The House Committee on Public Works and Transportation recently adopted a resolution to authorize a detailed study for possible improvements at the Emsworth, Dashields and Montgomery Locks and Dams on the Ohio River. The Corps has expressed a capability of \$200,000 to initiate the study in FY '83 under the Ohio River Mainstem Study. We strongly recommend that \$200,000 be added to the budget to enable the study to proceed.

Nelsonville Flood Control Project - We were extremely disappointed to learn that no funds were included in the FY '83 budget to allow for continued advanced engineering and design work on the Nelsonville Flood Control Project. After several years of inaction, \$200,000 was included in the FY '82 budget to initiate the engineering and design work on this project. The Corps is currently underway in this effort. However, with no funding in the proposed '83 budget to allow this work to continue, the Nelsonville project will again come to a halt. The people of Nelsonville and the Hocking Valley have been frustrated for years in their efforts to get this project moving. The flooding record at Nelsonville in this century shows at least ten major floods with four of those in the last twenty years, the latest in February 1979. The decision finally to include funding in the FY '82 budget was a relief to the people and an expression of commitment on the part of the federal government. The subsequent decision not to fund the project in the FY '83 budget bears close scrutiny by this subcommittee. We believe the project should be funded at a level commensurate with the Corps capability, \$200,000.

that project due to an anticipated minor delay of about one month in real estate acquisition activities. Local sponsors of the Point Place Flood Control Project are agreeable to such transfer of funds. In making this minor reallocation of funds, the overall funding for FY '83 for projects of this type in Ohio will remain unchanged while providing for timely action on both projects. Therefore, we recommend that the budget be adjusted to provide \$100,000 for the Big Creek Project for the purpose stated above and reflect a reduction in the Point Place Project amount from \$2,300,000 to \$2,200,000.

Geneva-on-the-Lake Harbor of Refuge Project - Serious boating accidents resulting from Lake Erie storms have focused increased attention on the need to establish a refuge harbor at this location along Lake Erie. Currently no such harbor exists between Ashtabula and Fairport, a distance of approximately 35 miles. The State of Ohio is committed to providing 50% of the construction costs for the Geneva Project as well as providing all necessary ancillary facilities. The FY '83 budget includes \$50,000 towards completing the pre-construction planning for this project. However, the Corps has expressed a total capability of \$138,000. The additional \$88,000 would advance the pre-construction planning by approximately one year. The one year advancement is in reality the original target date set by the Corps when it began the pre-construction planning process. The project is vitally important to saving boater's lives and it enjoys our strong commitment as the non-federal sponsor. Accordingly, we urge you to provide the additional \$88,000 to the Corps budget to keep this project on schedule.

Western Lake Erie Shore (Maumee Bay Shore Protection) Project - The Maumee Bay Shore Protection Project, recommended under the Corps' Western Lake Erie Shore Survey Study is critical to the completion of Maumee Bay State Park. Our plans for development of the park include a lodge complex, cabins and other significant capital improvements. However, these highly desirable developments cannot proceed unless erosion protection from Lake Erie is provided. The FY '83 budget includes no funding to advance the Maumee Bay Report (considered an interim report for the Western Lake Erie Shore Survey Study) past the normal review process. Consistent with guidelines established by the Office of the Chief of Engineers pertaining to completion of advanced engineering and design prior to project authorization, we respectfully request that necessary funding for advanced engineering and design work be appropriated by this subcommittee for the Maumee Bay Shore Protection Project.

Geneva State Park and Historic Site Project - The Ohio Department of Natural Resources is working to establish a state park facility at Geneva. A large bathing beach facility, including a bathhouse with extensive parking accommodations, was constructed in 1969. However, excessively high water levels at Lake Erie have jeopardized the existing development and eroded the beach. In addition, shore erosion, due in part to high lake levels, has stymied our proposed cabin developments. The need for erosion protection at this location has been well documented by the Corps in feasibility reports.

It is our desire to enlist the Corps assistance through authority granted by a resolution of the Senate Committee on Public Works on June 10, 1963. Such resolution refers to enabling legislation enacted by the Congress in Section 110 of Public Law 87-874, October 23, 1962. The Corps can initiate the survey study with specific reference towards addressing the erosion problem at Geneva State Park in FY '83 if funds are added to the proposed budget. We respectfully request that such funds be added to the Corps proposed FY '83 budget for this purpose.

Port Clinton Jetties (Lake Erie) - We strongly urge the subcommittee to appropriate funds to the Corps of Engineers to repair the hazardous west and east jetties at Port Clinton on

Lake Erie. These jetties protect the mouth of the Portage River which is an important harbor on Lake Erie. There are over 15 marinas, numerous charter boat operations, and 8 public boat ramp facilities on the Portage River which handle thousands of private boats each year. The Ohio Department of Natural Resources, Division of Wildlife, estimates over 30,000 boat fishing trips utilized the Portage River in 1980.

The necessary repair would consist of rehabilitating the previously deteriorated stone cap on the west jetty. Without repairs the exposed core material is subject to erosion from wave action, and loss of sufficient core material will undermine the structural integrity of the jetty.

Hazardous conditions currently exist at the east jetty because of the rubblemound stone cover. It is proposed that a level concrete walkway be built on the 1,000 foot structure.

The east jetty is used heavily by shore fishermen. Over 11,000 anglers utilize this facility every year. Many more would use it if it were not so hazardous. The City of Port Clinton has provided access to this facility and has constructed an adjacent parking lot.

The western basin of Lake Erie has become the "Walleye Capital of the World". In 1981 over 2.6 million walleyes and 10 million yellow perch were caught by sport fishermen in this western basin, as well as catfish, white bass, and other fish. The improved jetties would provide an excellent shore fishing facility and help meet our overall goal of increasing public access to Lake Erie.

STATEMENT OF MRS. MYRT JONES, PRESIDENT, MOBILE BAY AUDUBON SOCIETY

Having been a life-long resident of Mobile, Alabama I have seen our beautiful, historical and proud city change to one of un-planned growth with accompanying destruction of our cultural way of living and our quality of life.

The Tenn-Tom Waterway has played a major part in urban sprawl, destruction of "old neighborhoods", disrespect for individual rights and unplanned waterway development "at all costs".

Those of us active in environmental issues are well aware of the "brainwashing local editorials" being very biased and one-sided on the purported economic need for the continuance of this waterway and the projected benefits that supposedly will accrue if and when completed.

Having been actively involved on several of the Corps of Engineers Citizen Advisory Committees-the Black Warrior-Tombigbee Waterway (BW-T); the Tenn-Tom Corridor Study, the Mobile Harbor Committee, etc. I have read the volumes of materials released especially the '75 Economic Re-evaluation of the Tombigbee River System. Therefore I can freely object to the continuous need for financing this "sponge" of a project.

Congress is being requested to again "fork over" an "estimated" \$186 million for FY'83 and approximately \$344 million for after FY'83. The proponents are trying to phll the wool over Congress with the estimated cost to terminate amounting to approximately \$328 million. The savings resulting in terminating the project now will be in the billions of dollars.

I am well aware a Congressional Resolution was adopted stating that no modifications would be allowed made on the "southern terminus" from Demopolis to Mobile. This is not worth the paper it is written on if funds are appropriated for FY'82. The further along the Tenn-Tom is allowed to go the more pressure will be exerted in the future to modify the "southern terminus" in order to justify this project and the spending of the ^{two} billion of dollars.

The Mobile area ~~now~~ have tremendous problems with flooding because of floodplain modification and construction allowed within the floodplain costing the nation's taxpayers millions of dollars. The "southern terminus" is the major floodplain, riverine system to the north of us and any modifications within this river system such as channelization of the Tombigbee River proposed by the Corps the thousands of acres of farmlands, wetlands and timberlands that will be lost in the proposed straightening and deposition of dredged material could pose more flooding situations not now being considered in the BW-T proposed project that is not approved Congressionally as of yet.

Sedimentation problems within our harbor is a major costly national and State situation, that must be coped with annually now in order to keep the port open. Thousands of acres of wetlands and bay bottoms have been lost in deposition of dredged material and it is now becoming a critical situation in finding proper sites for the material.

With the proposed unauthorized project north of us-what sedimentation problems or loads will we have to accomodate?? How many more millions of dollars of taxpayers monies will be sunk into projects of this nature?? How many more acres of wetlands and bay bottoms-priceless, irreplaceable national treasures will we lose?? The loss of wetlands and bay bottoms are valuable for their "free societal benefits". They are major hosts for the lower forms of life so vital to the food chain. They are nurseries, habitats, storm buffers, water purifiers, aquifer rechargers, etc.

Emphasis is being placed on finishing the northern portion of the Tenn Tom WW. It must be recognized by Congress and the Administration that this waterway will not be economically acceptable unless the "southern terminus" is completed also. If requested funds are allocated for '82-'83 then Congress and the Administration must assume the responsibility for the spending of 3-4 billion for a "big ditch" for the exportation of coal.

Congress and the Administration must put the brakes on now on projects such as the Tenn Tom WW, Garrison project in No. Dakota and the O'Neill unit in Nebraska to mention a few. The Administration keeps telling the folks back home that we must pull in our belts. We find it difficult when projects are supported like this and our President spends over 3 million for a Caribbean cruise, for a dip in the ocean and taxpayers monies.

With unemployment rates at its highest, businessness going bankrupt, sky-rocketing interest rates, we all need to bite the bullet. The consumer pays in the end-so Congress should "mothball" these projects and any waterway projectsshould be re-quired to assume "full cost recovery" in order to stop subsidies. We all must assume our responsibility in order for this great Nation to even up its keel and the citizens of this Nation will join if rational budgeting and planning comes out of Washington.

STATEMENT OF RON KLATASKE, REGIONAL VICE PRESIDENT, WEST CENTRAL REGION,
NATIONAL AUDUBON SOCIETY

This statement is being submitted on behalf of our members and chapters throughout the country, particularly the 2,000 members in Nebraska who are concerned about the decisions of Congress which have a substantial impact on resources within Nebraska which are of statewide and national significance. Requests for funds for two projects which threaten the natural integrity of the most spectacular stretches of the two rivers with the most outstanding scenic, wildlife and recreational values of public interest are of greatest concern. The Niobrara and Platte are the subject rivers.

The O'Neill Unit would destroy much of the most spectacular stretch of the Niobrara River with inundation of 20 miles under the Norden Dam reservoir and afterbay, and the drastic dewatering and degradation of the river downstream in the entire 40-mile reach below the dam site which has been identified for its national importance for whooping cranes and bald eagles. It was proposed by the U.S. Fish & Wildlife Service as critical habitat for whooping cranes in 1978 but the proposal was later withdrawn due to political pressure from proponents of the O'Neill Unit.

Although the U.S. Bureau of Reclamation claims benefits for fish and wildlife enhancement, any reasonable assessment would indicate that these values of public interest would be served a superior degree by leaving the river valley intact with the excellent stewardship of private landowners.

Farm and ranch families stand to lose more than 30,000 acres of private land even though they never had an opportunity to vote in the referendums of the North Central Nebraska Reclamation District. This injustice contrasts sharply with everything we regard as the American way. When Secretary of the Interior James Watt was testifying before the Senate during his confirmation hearings he promised to establish a "good neighbor policy" for the Department of Interior. The O'Neill Unit is a glaring example of his idle promise. Condemnation of homes, farms and ranches for the production of more surplus corn is rather unneighborly by any standard.

Congress will never have a better opportunity to charter a new course. Aside from the cloud of uncertainty which has hung over Niobrara Valley landowners for decades, no damage has been done to the river valley or the other human and natural resource values involved. No land has been condemned.

Whereas the Bureau of Reclamation has claimed for years that the \$368 million project is two percent complete, the only thing which has been built is a small bridge over Plum Creek on a country road several miles south of the river valley. A photo of that bridge is enclosed. It was built to replace a bridge directly adjacent which was not designed to withstand the heavy loads of the anticipated earth moving equipment. It can't be more than 20 feet long and it is ridiculous to suggest that this represents two percent of the project. That would make it a \$7,360,000 bridge!

Far more citizens would benefit if the remaining 98 percent of the funds slated for the O'Neill Unit were used for bridge and rural road improvement. However, we realize that is not an option to be considered by this subcommittee.

We do urge the Subcommittee and Congress to consider other alternatives. First and foremost, the National Audubon Society supports the proposal by landowners along 62 miles of the river that those two stretches be protected as a national scenic river. This would be a positive non-structural alternative which would protect the public values of the river and the agricultural interests of the landowners. It could be a partnership arrangement between the Department of the Interior and landowners.

Second, the Carns Pump Diversion described in the report issued by the U.S. Bureau of Reclamation last fall merits consideration as a structural alternative to the O'Neill Unit. It would involve a 28-mile canal and irrigation service to 45,000 acres in Holt County. The Carns Pump Diversion would be more economically justifiable (although it would cost \$158 million), it would require that only a tenth as much private ranch and farm land would

be condemned for project features, and this more downstream diversion would not have nearly as devastating an impact on Niobrara River Valley resources or the interests of landowners along the river.

The O'Neill Unit will not supply any hydroelectric power -- in fact, it will diminish generation at the Spencer generation plant downstream. There are no appreciable flood control benefits. The figures for recreation are questionable because the most popular stretch of canoeing water in the Great Plains would be largely destroyed. The loss of the existing canoeing and camping recreational values have not been appropriately weighed with the reservoir recreation benefits claimed. Likewise, redistribution of existing reservoir recreation from existing reservoirs (like Merrit and Lewis and Clark Lake) have not been discounted from their claims.

The O'Neill Project is primarily an irrigation project. And more than half of the 77,000 acres in the project area are already irrigated. Because 30,000 acres outside the boundaries would have to be condemned, because the project will be so destructive to the natural landscape, and because it involves the expenditure of hundreds of millions of taxpayers' dollars it is compelling that members of the Subcommittee consider and balance all questions of national purpose and policy. With a national debt over a trillion dollars and a budget deficit threatening to exceed \$100 billion in the next year taxpayers have a right to expect responsible federal spending.

From the standpoint of national agricultural policy it is essential for Congress to address the propriety of subsidizing irrigation of 77,000 acres in one area at a federal cost of \$4,750 per acre when farmers throughout most of the remainder of Nebraska and the nation have to compete with their own investment capital. Furthermore, if the groundwater is being drawn down in the project area by excessive pumping it does not seem reasonable for taxpayers to finance recharge in the absence of water conservation measures and a ground water control management plan which will sustain existing water resources. To take the replacement water and land away from other landowners in the Niobrara Valley is robbing Peter, without a principle of fair play, to pay Paul.

We urge this subcommittee to discontinue appropriations for the O'Neill Unit, and to stop construction before it starts.

Likewise, we urge the Subcommittee to reject the request for funds to finance a feasibility study on the Prairie Bend Project which would involve diversion of the Platte River. Representative Virginia Smith has reportedly requested \$150,000 for the study.

Unfortunately, approximately ²⁰40 percent of the average annual flow in the Platte River in central Nebraska has already been appropriated to other diversions. The Prairie Bend project, combined with the Twin Valley proposal, and the other proposals (Little Blue, the Narrows Unit, Enders, and the Perkins County Canal) would completely decimate the internationally significant Big Bend section of the Platte River between Lexington and Grand Island.

This stretch of the Platte River attracts a quarter of a million sandhill cranes during the spring months as they depend upon that area during that season, along with waterfowl approaching two million in numbers. It has been designated as critical habitat for whooping cranes and it sustains substantial numbers of bald eagles.

The Society maintains a sanctuary along the Platte in this stretch. Along with other Platte River landowners we want to preserve this natural heritage for future generations.

Our members in Nebraska do not want to be the last generation to enjoy the most spectacular flight of migratory birdlife on the North American continent. They do not want to be the last generation to float the Niobrara River through a remarkably beautiful natural and pastoral landscape. They do not want to have their tax funds used to force their neighbors off their farms and ranches for projects of questionable merit.

If the decision and financial responsibility to build these projects were left to the citizens of Nebraska, they would never be built. Thus, as an organization which represents more than 450,000 Americans from other parts of the country, we urge this subcommittee and the U.S. Congress to avoid imposing this project on the Nebraska landscape, the adversely affected landowners, other citizens who care about these values and taxpayers everywhere.

STATEMENT OF ROBERT G. LACY, MANAGER, HEBER BINARY PROJECT, SAN DIEGO
GAS & ELECTRIC CO.

My name is Robert G. Lacy, the Project Manager of the Heber Binary Project for San Diego Gas & Electric Company. The Project is a 65 Mw (gross) binary cycle power plant. It will be the first commercial size plant of its kind in the world. As Project Manager, I am responsible for the design, construction, start-up, and demonstration of the Project.

I am a registered professional engineer in the State of California. I am a member of the American Society of Mechanical Engineers, and a member of the Board of Directors of the Geothermal Resources Council. I am also a member of the Advanced Power Systems Division Committee for the Electric Power Research Institute (EPRI); this Committee is responsible for providing direction to the EPRI geothermal program.

Before I begin my statement, I would like to thank this Subcommittee for the opportunity to discuss the Heber Binary Project. I would also like to express my appreciation for the leadership role shown by the Senate Subcommittee during the last five years, in support of the Project.

My statement will discuss the importance of the binary cycle to the development of geothermal resources and the urgency to demonstrate this technology. I will update you on the major progress made on the Project. I will also stress the importance of federal funding to the Project and the minimal burden on the federal government in view of the Cooperative Agreement with DOE. Finally, I will explain the unacceptable consequences that withdrawal of federal funds would have on the Project.

When this Subcommittee reviews federal funding for the Heber Binary Project, the following points must be considered:

1. The Interagency Geothermal Coordinating Council has established the goal of 25,000 Mw of electric capacity from hydrothermal reservoirs by the year 2000. This equals about 340 million barrels of oil each year. The binary cycle will account for at least half of the 25,000 Mw goal and could account for all 25,000 Mw.
2. The binary cycle must be developed because hydrothermal reservoirs do not have uniform characteristics.
3. The binary cycle must be demonstrated on a commercial scale before the electric utility industry can use hot dry rock and geopressure geothermal resources.
4. Unlike the binary cycle, the conventional, well-established flash cycle has an adverse impact on the environment through the release of noncondensable gases, which often include hydrogen sulfide.
5. The private sector has already made a large financial commitment to the Project and will pay fifty percent of Project costs.
6. The private sector cannot provide the additional financing necessary to move the Project forward without continued federal funding. Withdrawal of the federal funding would cause the termination of the Project.
7. The General Accounting Office (GAO) report on the Project, which was prepared at the request of this Subcommittee, affirmed the importance of the binary cycle and the need for continued federal funding for the Project.

8. Significant progress has been made on the Project and the momentum is picking up daily. The Project is on schedule.
9. The Cooperative Agreement that was signed by DOE and SDG&E to carry out the Project benefits both parties. DOE is not liable for cost overruns. The government contributions could be returned through revenue sharing.
10. The Project will reduce technical risks and should break down financial barriers to commercial use of the binary technology by the private sector.
11. National goals for geothermal development by the year 2000 would almost certainly not be met without the Project.

NEED FOR BINARY DEMONSTRATION

The binary cycle must be developed because hydrothermal reservoirs are not uniform. Reservoirs are different in size, temperature, dissolved solids, heat content, and chemical composition. Therefore, a single technology will not satisfy the requirements of full-scale geothermal development. Single- and multi-stage direct flash cycle and the binary cycle will all be required and will play important roles in geothermal development.

The utility industry has only one commercially available cycle that may be used to develop liquid-dominated hydrothermal reservoirs--the flash cycle. With the flash cycle, the hot geothermal fluid flows under pressure to a vessel where the fluid is allowed to boil, or flash, to produce steam. The steam then runs the turbine in a conventional manner. The flash cycle is well proven and has been in commercial service for a number of years, but its use is limited to high temperature (over 210°C) reservoirs and cannot be used at moderate-temperature reservoirs. The binary cycle will be used on the moderate-temperature (below 210°C) reservoirs, which represent 80% of the hydrothermal reservoirs in the United States.

The binary cycle will overcome the limitations of the flash cycle. This concept uses heat exchangers to transfer heat from the hot geothermal fluid to another liquid known as the working fluid. The working fluid is heated and vaporized and then used to drive the turbine to produce electricity. The advantage of this approach is that a working fluid can be selected which has a boiling point equal to the prevailing temperature, either high or low, of the geothermal resource. The amount of energy production is limited only by the ambient air temperature. This flexibility allows us to generate electricity from the moderate-temperature reservoirs and improve resource utilization at other reservoirs. The binary cycle has been used on a small-scale in other industries, but has not yet been developed for full-scale commercial power generation. The 5 Mw Raft River Project and the 10 Mw Magma Project are pilot plant efforts to generate electricity. These projects will not be relied upon by the electric utility industry to make decisions for commercial scale power plants. Our objective with the Heber Binary Project is to advance the binary cycle to commercial maturity. Simplified flow diagrams for the flash cycle and binary cycle are shown in Figure 1.

To gauge the importance of the binary cycle, about four out of five hydrothermal reservoirs in the United States are moderate-temperature reservoirs and will require the binary cycle for both technical and economic reasons. Furthermore, if, as expected, reservoir temperatures decline with time, the need for the binary cycle will become even greater.

Another way of measuring the need for the binary cycle is to examine the total electric production that can be developed from hydrothermal reservoirs. In June 1980, the Interagency Geothermal Coordinating Council, chaired by DOE, established the goal of 25,000 Mw of electric capacity from hydrothermal reservoirs by the year 2000. This equals about 340 million barrels of oil each year. The binary cycle will account for at least half of the 25,000 Mw goal. In fact, the binary cycle could account for all of the 25,000 Mw because it is applicable to all reservoirs over the entire spectrum of reservoir temperatures.

The binary cycle also provides other potential advantages over the flash cycle, such as greater efficiency of energy extraction, elimination of noncondensable gas emissions, and elimination of steam carryover problems. Such advantages could make the cost of construction and operation of a binary cycle plant lower than the cost of a similarly sized flash plant, significantly reduce the amount of auxiliary energy required to operate the plant, and minimize its environmental impact.

The Heber Binary Project is essential to advance the state of the art to commercial maturity and to further develop binary cycle power plant components. To demonstrate the commercial viability of a binary cycle geothermal plant, turbines and other systems must be manufactured, tested, and operated. Although preliminary designs for commercial size binary turbines have been prepared, they have never been built or operated. Other areas where development or verification must be accomplished prior to commercial application include downhole well pumps; plant and component reliability; safety and environmental impacts; heat exchangers; working fluid characteristics; waste control technology, such as cooled brine reinjection; and plant operating procedures and performance.

On November 12, 1980, this Subcommittee asked the General Accounting Office to perform an independent evaluation of the Heber Binary Project and, in particular, to assess the impact, on the Project of the withdrawal of federal funds. Their report to you concluded that a large majority of the nation's hydrothermal geothermal resources can be effectively used only with the binary cycle technology. The report further concluded that elimination of federal funding would cause the Project to be terminated resulting in failure to meet our national energy objectives.

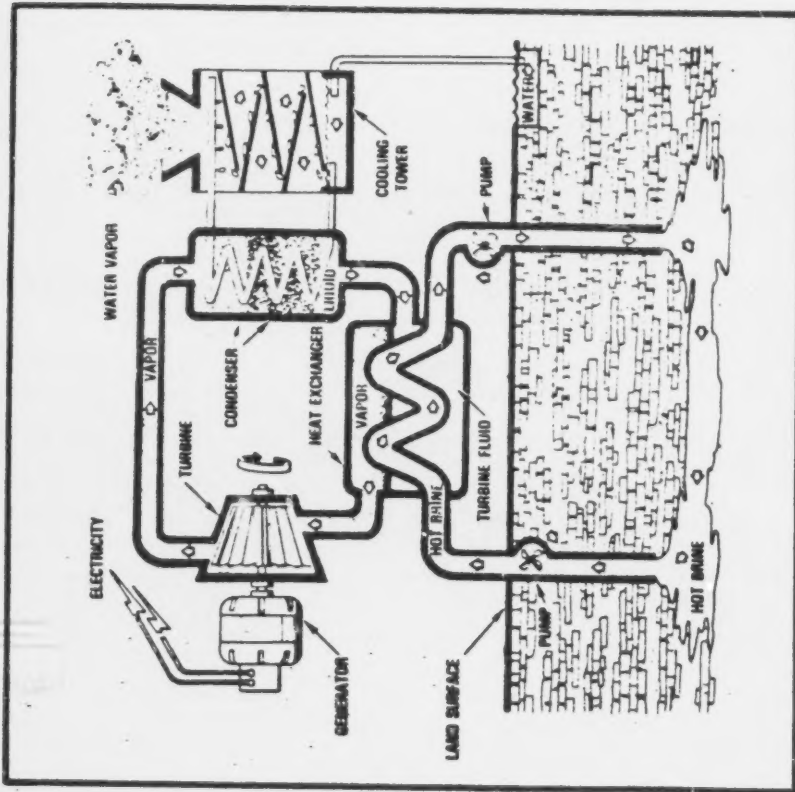
The Binary Cycle Is Essential to Commercialization of Hot Dry Rock Resources

Hot dry rock resources will not be used by the electric utility industry unless the binary cycle is demonstrated on a commercial scale.

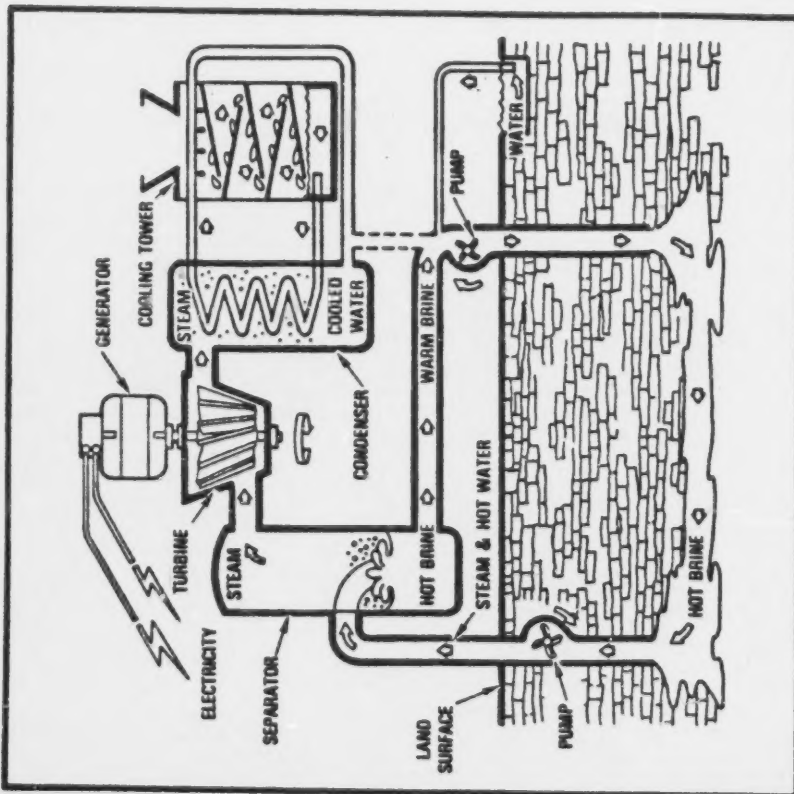
A hot dry rock resource is defined by DOE as heat stored in rocks that contain little or no water. The lack of sufficient water to transport the heat distinguishes hot dry rock from naturally occurring hydrothermal reservoirs. Hot dry rock resources occur throughout the United States in extremely large quantities. Los Alamos Scientific Laboratory has estimated that if as little as 2% of this vast resource base could be exploited, it would supply the entire country's nontransportation energy needs at the present rate of consumption for more than 2000 years.

To extract energy from a hot dry rock resource, a manmade hydrothermal reservoir is formed by connecting two deep holes in impermeable rock through a system of fractures in the rock which are produced by pressurizing water. Cold water flows down the deeper hole, is heated by the hot rock in the underground fracture system, and is brought to the surface in the second hole under sufficient pressure to keep it from boiling or flashing. After the hot water runs through a heat exchanger at the surface, it is pumped back down the injection hole. Because the hot

BINARY SYSTEM



FLASH SYSTEM



water is kept under pressure, the only way to use its heat is to transfer it to a working fluid in a heat exchanger. This constraint dictates the use of the binary cycle if the heat is to be used to generate electric power.

The Binary Cycle Is Applicable to Geopressure-Geothermal Resources

Water-bearing reservoirs, characterized by significantly higher temperatures and pressures than their depth would suggest, have been discovered along the Gulf Coast and other areas of the United States. These reservoirs, called geopressured aquifers, contain three forms of energy:

1. Chemical energy - Considerable amounts of natural gas, or methane, could be dissolved in the waters of these aquifers.
2. Thermal energy - The relatively high temperature of the waters could be used for the generation of electricity using the binary cycle.
3. Mechanical energy - The high water pressure could be used to drive turbines.

Recovery of methane is the primary target of the DOE Geopressure Geothermal Program. If the methane can be produced at competitive cost, use of the thermal and mechanical energy will follow--provided the binary cycle is commercially available to the electric utility industry.

Geopressured aquifers are estimated to contain between 3,000 and 50,000 quads of energy and constitute a major U.S. energy target.

The goals of the DOE Geopressure Program are to determine:

1. The magnitude of the resource base,
2. The amount of the methane that is technically feasible to produce,
3. The probable production lifetimes of individual reservoirs,
4. The economics of developing the thermal and mechanical energy, assuming methane recovery is economical, and
5. To resolve associated environmental and institutional barriers.

All of the geopressured aquifers which have been evaluated as part of the DOE Program contain low- to moderate-temperature water (below 210°C).

The binary cycle has to be used to convert this energy to electricity. This fact was acknowledged by DOE when it proposed the use of Total Energy Systems as a potentially attractive way to integrate the three forms of geopressured aquifer energy (chemical, thermal, and mechanical) into a commercial system. The proposed binary cycle plant, which is part of the Total Energy System, would use a cycle like the Heber Binary Project.

SDG&E BACKGROUND IN BINARY CYCLE DEVELOPMENT

SDG&E has conducted geothermal exploration, research, and field test development since early 1971. SDG&E began conducting field tests applicable to binary cycle technology in 1973. Small heat exchangers, with the hot, highly mineralized brine flowing directly through the tubes, were used to heat a working fluid. These tests revealed the high scaling tendencies of the brines at the Niland reservoir in the Imperial Valley, and the company set about to develop ways to overcome this problem. In

1974, a multi-stage flash/binary system was designed. It removed heat from the geothermal fluid in the form of steam. Based upon field tests of this system and under a 50-50 cost sharing arrangement with DOE, SDG&E built and operated a 10 Mw Geothermal Loop Experimental Facility (GLEF) to evaluate the practicality of the flash/binary conversion process.

Valuable experience, of direct benefit to the Heber Binary Project, was gained through the design, construction, and operation of the GLEF. Special construction techniques were employed for the desert soil and weather conditions of the Imperial Valley. Operational problems, such as high injection well pressures, scale deposition, and erosion of plant piping and components were identified and overcome. The GLEF also provided insight into plant cleaning operations and reservoir performance and furthered the development of important plant components.

To determine scaling characteristics of the Heber brine, SDG&E, in cooperation with EPRI and Chevron Resources Company, conducted heat exchanger tests at this reservoir in 1974. These tests consisted of a series of 500-hour runs with four small heat exchangers and three different tube materials. The results of these tests were published in EPRI Report ER-376, "Final Report of Test and Evaluation of a Geothermal Heat Exchanger," September 1975.

EPRI followed up the first 500-hour heat exchanger test with a 2000-hour test, which verified the findings of the first scaling and corrosion tests. The quantity of noncondensable gas in the brine was also determined. Results of this test were published in another EPRI Report ER-572, "Final Report of Geothermal Heat Exchanger at Heber, California," August 1978. Data from the testing program formed the basis for full-scale design criteria for the Heber Binary Project.

ISTORY OF THE HEBER BINARY PROJECT

The Heber Binary Project had its beginning in a study performed for EPRI by Holt/Procon. The purpose of the study was to evaluate alternate technologies that could exploit the extensive low- to moderate-temperature geothermal reservoirs in the United States. The study also screened 17 candidate reservoirs to determine which would be best to demonstrate the selected technology on a commercial scale. The results of the study were published in 1976 and 1978 as EPRI Reports ER-299, "Geotechnical Environmental Aspects of Geothermal Power Generation at Heber, Imperial Valley, California," October 1976; ER-301, "Geothermal Energy Conversion and Economics--Case Studies," November 1976; ER-364, "A Comparison of Hydrothermal Reservoirs of the Western United States," December 1976; and ER-670, "Preliminary Design Manual for a Geothermal Demonstration Plant at Heber, California," February 1978. The study concluded that the binary cycle showed the most promise for application to low- to moderate-temperature reservoirs, and that the Heber reservoir was one of the best sites to demonstrate the technology on a commercial scale.

In 1977, SDG&E agreed to manage a demonstration project with a capacity of 65 Mw (gross) that would be located on the Heber reservoir. This decision was based on SDG&E's extensive geothermal experience and EPRI's supporting work. Consequently, a project was formed with participation by SDG&E, EPRI, six other utilities, two reservoir developers, and the California State Energy Commission. Engineering and environmental studies were initiated and efforts were made to obtain federal funding for the portion of project costs that could not be financed by industry. In 1978, federal funding was not forthcoming and because the risk of this first-of-a-kind project was greater than industry could assume, the project was terminated.

In 1979, when DOE was directed by Congress to proceed with the demonstration of the binary cycle on a commercial scale, SDG&E again submitted a project proposal. This proposal was accepted by DOE, and in September 1980 the parties signed a Cooperative Agreement. Other agreements to carry out the newly-formed project have been signed with EPRI and a group of three utilities--the Imperial Irrigation District, California Department of Water Resources, and Southern California Edison Company.

It is important to note that substantial progress was made on the Project prior to signing the Cooperative Agreement with DOE--all of it funded by the private sector. For instance:

1. Extensive reservoir exploration and evaluation were completed.
2. The plant conceptual design was in place.
3. Engineering trade-off studies were performed.
4. Turbine-generator conceptual designs were completed.
5. Environmental studies were completed.
6. A land use permit was obtained from Imperial County.
7. The site was acquired.
8. An assured source of cooling water was acquired.

PROJECT ORGANIZATION AND FUNDING

SDG&E has formed a consortium to fund and operate the Project. The contributions to funding and ownership interests of the six participants are as follows:

<u>PARTICIPANT</u>	<u>FUNDING</u>	<u>OWNERSHIP</u>
Department of Energy	50.0%	---
Electric Power Research Institute	10.0%	---
San Diego Gas & Electric	32.8%	86.3%
Imperial Irrigation District	4.0%	10.5%
Department of Water Resources	1.2%	3.2%
Southern California Edison	2.0%	---

SDG&E is responsible for managing the Project, including its design, construction, start-up, and demonstration.

CURRENT STATUS OF THE PROJECT

Union Oil Company has been selected as the geothermal heat supplier for the Project and negotiations for the heat sales contract are complete. Union will be initiating pump and well tests at the site this Spring.

A contract has been signed with Fluor Power Services to perform the engineering design work for the Project. All plant systems have been defined and are in the process of being released for detailed engineering. Detailed engineering will result in the preparation of construction drawings to be used when construction starts later this year.

Dravo Utility Constructors, Inc. (DUCI) has been selected as the Construction Manager and has assigned key personnel to San Diego. These personnel are preparing the detailed construction schedule and are working with Fluor, the Architect/Engineer, to prepare construction bid packages.

Despite the uncertainty of continued federal funding, we have maintained the Project schedule. In fact, we are now considering the option of advancing the scheduled date for completion of construction by three to six months.

The following is the latest status on major equipment procurements for the Heber Binary Project and the estimated cost.

1. The manufacturer has been selected for the turbine-generator. The value of the procurement contract is approximately \$6,100,000.
2. Proposals have been received for the main transformer. The proposals are now being evaluated and the estimated value of the procurement contract is \$500,000.
3. Proposals have been requested on twelve items of equipment and selections will be made in the near future. The estimated total value of these procurement contracts is \$5,514,000.
4. Proposals will be requested on the remaining thirty-four pieces of major equipment within the next few weeks. The total estimated cost of these procurement contracts is \$35,636,000.

Through the end of Fiscal Year 1982 the total Project expenditures, including commitments we will make for all of the equipment will be approximately \$59,756,000. It should be noted that this number does not include costs totaling approximately \$25,600,000 incurred solely by the private sector for reservoir exploration and development, field testing, environmental studies and plant conceptual design.

FEATURES OF THE COOPERATIVE AGREEMENT THAT ARE FAVORABLE TO THE GOVERNMENT

The Cooperative Agreement differs from other more conventional contracts used by DOE to fund projects. It recognizes that the Heber Binary Project is a partnership, with the private sector bearing a major part of the risks. It permits the Project to be managed by the private sector with minimal burden on DOE.

The private sector has a large financial interest in the Project and, consequently, a great incentive to achieve success.

Some of the key features of the Cooperative Agreement that are favorable to the government include:

1. A revenue sharing provision which will return to DOE the government contribution if the demonstration power plant is successful and can be operated as a commercial facility.
2. A ceiling on government financial exposure so that if the cost ceiling is exceeded, the government has no liability for cost overruns.
3. Provisions for the broad dissemination of data from the Project to industry so that others interested in making commercial commitments to the binary cycle can do so with minimal risk.

EFFECT OF DOE WITHDRAWAL

SDG&E, like the rest of the utility industry, is experiencing financial constraints that prevent it from undertaking completely on its own a demonstration power plant like the Heber Binary Project. By law, SDG&E is required to meet the needs of its existing and future customers; consequently, its scarce financial resources must be used to add commercial generating plants and related transmission lines and to accommodate new customers on its system. With the approval of the California Public Utilities Commission, we have reallocated our limited

R&D budget to provide our share of the funds to the Heber Binary Project. SDG&E cannot provide additional funds.

Furthermore, the company does not believe that the funding shortfall that would result if federal funds were not provided to the Project could be replaced by industry or the other Project participants. In 1978 when federal funding for the Project was not granted, SDG&E and EPRI canvassed the utility industry in an effort to replace what was then a much smaller shortfall; these efforts were unsuccessful. In 1979, SDG&E again tried unsuccessfully to obtain additional financial participation. The electric utility industry cannot fund demonstration projects on its own. We are having enough difficulty obtaining the capital needed to meet our customers' needs using proven technology. The non-federal funding which we now have for the Project is the maximum we can obtain. While industry is united in its support and need for the Project, sufficient additional funding is simply not available to permit the Project to go forward without federal support.

Without federal funding this essential Project will be abandoned. The likelihood of its being resurrected and completed in the near future is negligible. As a result, four out of five of the hydrothermal reservoirs in the United States will not be developed.

CONCLUSION

In conclusion, I urge this subcommittee to demonstrate your continued support for the Heber Binary Project. Funding in Fiscal Year 1983 is essential if the Project is to proceed. Justification for your continued support includes:

1. Binary cycle will permit the achievement of at least half of the 25,000 Mw goal.
2. The binary cycle is an environmentally desirable source of electricity.
3. The binary cycle is essential to the commercial development of hot dry rock and geopressure geothermal energy resources.
4. The Cooperative Agreement between DOE and SDG&E is beneficial to both parties.
5. Industry has already made a large financial commitment to the Project.
6. Major progress has already been made on the Project that would be lost if the Project is abandoned.
7. The Project cannot proceed without continued federal funding.

STATEMENT OF DAVID K. HIGA, PRESIDENT, PROPELLER CLUB OF THE
UNITED STATES

The Propeller Club of the United States, Port of Honolulu, whose purpose is to promote, further and support an American Merchant Marine and to aid the development of rivers, Great Lakes and harbor improvements, would like to set forth its position on the matter of proposed user fees to recover federal expenditures for navigation projects.

With the exception of the 1978 inland waterway legislation, the services of the U. S. Army Corps of Engineers have been rendered without user taxes or other charges for the benefits of the public as a whole. These services cover boating, fishing, recreation, flood control, water supply, erosion containment, pollution prevention and environmental control purposes as well as shipping. To single out any specific segment of the community and impose such costs exclusively to them when the nation as a whole benefits from the operation, maintenance and construction of such facilities is grossly unfair. Therefore, the present system of full federal funding which recognizes the fact that all people of the United States are the beneficiaries of the port system and provides for shared participation for funding of the system should be continued.

Further, the Port of Honolulu wishes to go on record as supporting the State of Hawaii's position regarding this matter which is quoted in part as follows:

"Hawaii's Statewide Harbor System presently consists of eight commercial harbors--nine with the construction of Barbers Point Harbor. The hub of the system is Honolulu Harbor located on the Island of Oahu with satellite ports on the islands of Kauai, Maui, Molokai, and the Big Island of Hawaii.

Hawaii is almost solely dependent upon ocean transportation. Eighty percent of all the goods and materials we need is imported, with 98 percent of these imports by ocean shipping.

I would like to point out that any form of Federal costs recovery by the imposition of fees or the requirement of non-Federal interest financing new construction will be discriminatory to Hawaii and will have a potentially devastating effect on our Island economy and basic lifestyle.

Hawaii's situation in this matter relates to other Island States and Territories as exemplified by a recent resolution by the American Pacific Island Governors. We are all geographically isolated and very dependent on ocean shipping.

Hawaii's position on this matter is premised on the following:

Our harbors are constructed and maintained as a lifeline. Shipping into Hawaii is required for the basic sustenance of the citizens of this State and not primarily for the enhancement of the economic base of the community. Hawaii is a consumer State where the ratio of overseas imports to exports is about 2 to 1. Almost all our imports are consumed by the community and are not for reprocessing for export. Forty percent of the total cargo carried by Hawaii's largest shipping company, Matson, is food products for the islands. In comparison, the mainland communities receive their basic sustenance primarily by rail and highways. Our major exports are agricultural products--sugar, molasses, and pineapple which cannot afford any additional imposed costs in view of

the poor world markets for these commodities. The volume and value of these exports cannot support the proposed Federal recovery program like coal, grain and other major export items of the Continental U. S. harbors which are destined for foreign consumption.

Because we are an island State, our intra-state movement of cargo is by an inter-island barge system rather than a network of highways or rails. The State must insure the continual safe and economical operations of seven harbors, in addition to Honolulu Harbor.

Eighty percent of all overseas shipping into and out of Hawaii is interstate commerce. The proposed recovery fees will be assessed to cargoes or vessels as they enter or leave a U. S. port. This means that the major portion of cargo destined for Hawaii will undoubtedly be assessed a minimum of two times—once leaving the Continental U. S. port and once when it enters Hawaii's port. Additional assessments may be necessary when transshipment via inter-island barge is considered. All such costs must be absorbed by the citizens of this State.

Further, Hawaii is a terminal point where all costs of transportation and harbor fees including the proposed recovery fees will be eventually paid by the 900,000+ people of this State. In comparison, mainland ports are essentially distribution terminals for import cargo and consolidation and shipping terminals for export cargo. These ports service a huge economic and population base which extends well beyond the immediate port community and state.

It should also be noted that the commercial harbors in Hawaii are built into the sea and protected by breakwater structures. Being exposed to the open seas, and in particular the winter Pacific storms, it is necessary to expend an average of \$2 million annually for dredging and repair of protective structures.

As to new construction, Hawaii by itself could not afford to finance or reimburse the full cost to the Federal Government for a new harbor or extensive navigational improvements to existing harbors. The present local responsibility of improving, operating, and maintaining existing shoreside facility is just attainable. The imposition of additional costs for needed navigational projects will be financially untenable for our State. For example, based on the bids for the pending construction of the new Barbers Point Harbor, this project will cost about \$50 million for the basic dredging and protective structures. If the State were required to finance this project or reimburse the Federal Government for its construction, all our harbor fees will have to be immediately increased 1.5 to 2 times existing rates. This entire increase is eventually passed on to the people of this State through higher cost in consumer goods. Such an increase would be intolerable for Hawaii's people in light of already rising costs in a State with one of the highest cost of living. This situation will be analogous to the Island of Molokai where extensive modification of the existing barge landing for deep-draft vessels may be needed in the future and the anticipated cost impacts would be similar."

In summary, any user fee schedule or system of cost recovery which would impose the financial burden of construction, operation and maintenance

of the port systems upon one segment of the population would not only be grossly discriminatory, but also serve only to increase the cost of the goods and services passing through such systems and would ultimately invite other alternatives to the continued use of said systems.

In the case of Hawaii and other island states and territories, the economic impact on the citizenry of these locales could be devastating and they should be exempted from such measures.

STATEMENT OF L. SCOTT TUCKER, EXECUTIVE DIRECTOR, URBAN DRAINAGE AND
FLOOD CONTROL DISTRICT, COLORADO

Please consider this letter a request to be included in the hearing record of the Energy and Water Development Subcommittee of the Senate Committee on Appropriations which I understand is scheduled to be started on March 22, 1982. I would be pleased to appear before the Committee, but I have been advised that all times for oral testimony have been allotted.

The Urban Drainage and Flood Control District of the Denver metropolitan area respectfully requests that the Senate Appropriations Committee include in the FY 1983 budget monies for continuation of advanced engineering and design work on the Westerly Creek flood control project in the Denver, Colorado, area in accordance with Section 101(c) of PL 94-587. This project is currently proceeding through the authorization process and was submitted to the Secretary of Army by the Chief of Engineers on December 23, 1981. A copy of the Chief of Engineers' letter is enclosed. Chief of Engineers, General Bratton, recommended authorization to construct and to otherwise implement the Project, subject to cost-sharing and financing arrangements which are satisfactory to Congress and the President.

The project, an integral part of downstream channel improvements, involves the construction of a flood control reservoir and associated works on Lowry Air Force Base to protect a highly developed urban area in Denver and Aurora, Colorado, including Stapleton International Airport. The project is of such importance to the local entities involved that they have proceeded to implement with local funds the downstream channel improvements which are an integral part of the proposed Corps project. Local expenditures to date are \$4,162,300; and \$3,094,100 are committed by local entities in 1982 to complete these downstream channel improvements. The record should highlight the high level of funding support and cooperation that has been achieved by various levels of government in developing and implementing the Westerly Creek flood control and floodplain management plan. Continuation of advanced planning and design for the upstream detention facility, which is located on Air Force property, will avoid costly delays that will otherwise result when project authorization eventually occurs.

Funds for continuation of advanced planning and engineering are not in the President's proposed FY 1983 budget. The Corps of Engineers has advised that they have the capability to initiate advanced planning and design on Westerly Creek in 1983 at a funding level of \$200,000. The total estimated cost for engineering through phase one general memorandum is \$400,000, and \$200,000 would therefore have to be budgeted in FY 1984 to complete this phase of advance planning and design.

The additional work proposed by the Corps is critical in terms of what has already been designed and constructed with local funds. Time is very important, and I am sure you are aware of the long time span that it takes to initiate a project involving the Corps. Continuation of advanced planning and design is an attempt to keep this time frame at a minimum. Also, if advanced planning and design is not continued, it will have to be re-initiated when the project is authorized and several costly years will be lost to inflation.

The Urban Drainage & Flood Control District is the local sponsor for the project. Other local governments that would participate in the project with the Urban Drainage and Flood Control District and the Corps are the cities of Aurora and Denver. Local funds required for the project have been budgeted pending authorization of the project by Congress.

If further information is needed, I would be happy to provide it to you.

LETTER FROM KEN WELZENBACH, 1ST WARD ALDERMAN, DAVENPORT, IOWA

April 12, 1982

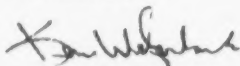
Honorable Mark O. Hatfield, Chairman
Committee on Appropriations
Subcommittee on Energy and Water Development
1322 Dirksen Office Building
Washington, D.C. 20510

Dear Senator Hatfield:

As you are aware, a small group of protestors who live outside of areas threatened by floods are opposing the Davenport Flood Control Project. This opposition to a long anticipated project has deeply disturbed many residents of the City. The attached petitions reflect their concerns.

I was asked if I would forward the petitions to the appropriate people. Therefore, I am fulfilling that request and I urge you to favorably consider Davenport's Flood Control Project.

Sincerely,



Ken Welzenbach
1st Ward Alderman

We, the undersigned residents of Warrenport, support Mayor Charles Whipple and the City Council in obtaining a flood wall.

1. Charles C. Gray 222 S Michigan Ave, Ia
2. Stephen J. Gray, 1228 S. Michigan Ave, Ia
3. Fred Henth, 1228 S Zenith Ave - Ia
4. Marlene, 3113 Duane Avenue NW, Doris
Sidell Hines 3015 Franklin Ave, Ia
6. Murray Charles Egger 3307 Rockingham Road Ia
7. Scott A Weaver 122 N ROLFF DAV
8. Donald J. Sosa 3223 Homestead Ave
9. Wm J. Luster 118 So Concord Ave. Ia.
10. Mrs. Harry Farcher 1214 S Michigan Ave.
11. Sandra Klot 19 Elm Street Ct DAV
12. Mrs. Wm. William Goodman 1415 S. Fairmount
13. Mr. Mark Mathias 2217 W 3rd St DAV
14. Jean E Mathias P.O. Box 4312 DAV, Ia
15. ~~Mr. & Mrs. Richard John~~ 2324 Second Pa.
16. Mr. & Mrs. Wm. Flynn - 909 Floral Ave.
17. Mr. & Mrs. Daniel Tiedert - 1307 S Zenith - DAV
18. Mrs. Louis Olson 3237 Orchard Ave
19. ~~Mr. & Mrs. George~~ 1111 1st Ave Ia
20. Mrs. Brinkley 632 3rd St Buffalo Ia
21. Mrs. Chas. Hudson 3115 Perry Ave - DAV Ia
22. Mrs. Edward, Sr. 320 - Orchard DAV Ia.
23. Mrs. Mrs. Gustav R. Dyer 3131 Homestead Ave.
24. Mrs. Paul 2908 Rockingham DAV, IA
25. Bob Shaper 707 So Rittman
- 1 John Callahan 3231 Pansy Ave DAV, IA
2. Crook & Ben 1125 S Concord DAV - Ia
3. Ben 1125 S Concord DAV - Ia
4. Mrs. Dickson 112 S Michigan Ave Ia
5. Mrs. Dickson 910 S Michigan Ave Ia

- 6 Linda Lee 1031 S. Concord Ave Iowa
- 7 Eugene Hoffman 521 S. DITTMER DR. IA.
- 8 Enoch Horton 345 Gary Iowa
- 9 Charles E. Horton 3115 Perry Iowa
- 10 John Chandler 2809 E. Gayman " "
- 11 John Schmidt 511 So Concord " "
- 12 Paul Beebe 513 S. Erie " "
- 13 Mr & Mrs R. H. B. B. 319 W. 2nd " "
- 14 Mary & Amy 1047 So. Elm Iowa
- 15 Nancy Sincener 4405-13th St. Iowa
- 16 Joseph B. Johnson 3114 N. Lincoln Iowa
- 17 Linda Lee 9 Blue Grass Ct. Iowa
- 18 Randall Traum 1070 E. 2nd
- 19 Andy & Getta 3231 Kotha Ave Iowa
- 20 James Cunningham 2018 Brady Iowa
- 21 Ann Thiemann 3362 Yorklingham
1. Lemuel J. Harris 1413 So. Nevada 322-7761
2. Greta M. Jones 129 S. Concord Iowa 323 8488
3. Philip H. 3719 N. Tamm^{High} 391-56614
4. Keith Barton 1323 S. Michigan
5. Frankie Sinder 3239 Sunnyside
6. Ed Bell Danforth - IA
7. Roy M. Sander 3253 Orchard Ave
8. Brian Stormer 3118 W. 2nd St.
9. Kate M. Laidie 625 Kirkwood St.
10. E. D. Laidie 5000 RIVER DR 4/3/51
- 11 Carolyn Clark 591 E. Bluff Dr. Danforth
12. William L. 3124 Kotha Ave 322-0027
13. Mary Kapantais 3129 Marion Iowa
14. Joe Hossain 1301 S. Nevada Danforth
15. A. Hett 3232 Perry Iowa
16. Clara Luff 2406 W. T. Stages Iowa
17. Fred M. Thompson 3 Blue Grass Ct. Iowa IA.

18 Jim Ryan 1106 S. Main St. Day. Ia
 19 Arch Dugally 1204 Marshall Day.
 20 J. Dugally 1712 Division St. Day.
 21 J. Dugally 2525 W 60 St.
 22 Army Long 211 S. Forement Day. 323-1242
 23 Betch Haines 526 W 14th St Day. Iowa
 24 Jim E. Jeff 2139 HIGHLAND DAY. IA 326-3684
 25

1. F. J. J. J. J. 507 S. Ohio 324-0823
 2. J. J. J. J. J. 3842 Pearl Ave. 326-0740
 3. J. J. J. J. J. 610 W. 1st St. 323-7386
 4. J. J. J. J. J. 3842 Pearl Ave. 326-5436
 5. J. J. J. J. J. 570 Schmitt Rd 322-0775
 6. J. J. J. J. J. 3116 Buckingham 323-1459
 7. J. J. J. J. J. 3116 Buckingham 323-1459
 8. J. J. J. J. J. 1648 W 35th Daymont.
 9. J. J. J. J. J. 4001 Chicago St. Day. 329-5080.
 10. J. J. J. J. J. 3244 Perry Ave Daymont Ia 326-0281
 11. J. J. J. J. J. 3244 Perry Ave. 326-0281
 12. J. J. J. J. J. 3232 Perry Ave 326-0396
 13. J. J. J. J. J. 3223 Perry 323-0778
 14. J. J. J. J. J. 3224 PAPER 322-3801
 15. J. J. J. J. J. 1519 S Concord 322-4199
 16. J. J. J. J. J. 1515 S. Concord 323-6334
 17. J. J. J. J. J. 1511 S. Concord 323-6837
 18. J. J. J. J. J. 1507 S. Concord 324-3620
 19. J. J. J. J. J. 1419 S. Concord 323-2883
 20. J. J. J. J. J. 1407 S. Concord
 21. J. J. J. J. J. 1402 S. Concord 326-0735
 22. J. J. J. J. J. 3247 Sunnyvale Ave 322-0393
 23. J. J. J. J. J. 3239 Sunnyvale 322-4379
 24. J. J. J. J. J. 323 Sunnyvale
 25. J. J. J. J. J. 3232 Sunnyvale 322-7692
 1. Peter A. Doublet

2. Wayne L. Zehner DAV IA
3. Brenda McDermott DAV IA
4. Thomas Tush 118 N. Kelly DAV
5. Harry Constantine DAV Ia
6. Clara Constantine River Ia
7. Robert H. Hobbs River Ia
8. James H. Hinchey Junior 3706 S. Concord
9. Jim Baird 1130 N. Linwood DAV
10. Ronnie Behannon 310 S. Pine DAV
11. Jim Lee 4302 Rexingham DAV
12. Ray McStype DAV Ia
13. Carol McDowell
14. Harold H. Hinch 4316 Buckingham Road DAV Ia
15. Fred Hinch 714 Indian Rd DAV Ia
16. John Hinch 2212 W 4th
17. Mike Ward 3019 W. 2nd St. DAV
18. John Hinch 2900 S. Concord
19. E. E. Hinch 5032 W. RIV. DR. APR 21-1951
20. Charles J. Callahan 2105 W 5th DAV IA
21. Barbara Sturgeon 6600 Radcliffham
22. Guley O. Buckingham 428 Fairmount
23. Rauld Richardson 2807 Dickin
24. Mike Baker DAV Ia
25. Ray D. Dumble DAV IA KEOTA AVE
1. Mrs. L. A. Haggren 2101 Radcliff 4/10/51
2. Mrs. Bail E. Hamilton 504 S. Concord
3. Ernest H. Moore
4. Leroy M. Schewe 3253 Concord Ave
5. John H. Kyle 3416 Concord Ave
6. James L. Lee 3003 Radcliffham Rd
7. John H. Hinch 2101 Radcliffham Rd
8. L. A. Hinch 2101 Radcliffham Rd
9. Fred H. Hinch 2101 Radcliffham Rd

10. Peggy Hagler 3111 Sunnyside Ave.
 11. Carl Hagler 265 S. Burwood Ave.
 12. Edw. Miller 3137 Hickman Ave.
 13. Ruth Brainerd 711 South Pittman Ave.
 14. Sheila Brainerd 711 South Pittman Ave.
 15. Bob Young 3837 SUNNYSIDE DAV
 16. Kathryn LaFrenz 3845 Hobson Ave DAV. Ia
 17. Mrs. J. E. Young 3124 Sunnyside DAV Ia
 18. Mrs. Lynn Stuck 962 S Concord DAV Ia
 19. Mrs. Anna Wilson 1000 Newport, Iowa
 20. Mrs. Fayal J. Young 3524 Rockingham Rd. DAV
 21. Linda F. Bestman 5620 Nubis Ct. DAV. Ia.
 22. Richard C. Bellows 3430 Sunnyside Ave.
 23. Wayne Smith 1650 W. Garfield
 24. Nellie Davis 1650 W Garfield
 26. Victor J. DeBow 3231 Sunnyside
 27. Mrs. L. L. Beloit 3235 Sunnyside
 28. Mrs. B. Wright 3238 Sunnyside
 29. Mrs. F. J. Glickner 3240 Kiota
 30. Mrs. J. J. James 3236 Kiota
 31. J. C. Longoria 3239 Pansy
 32. Dorothy Offle 3243 Pansy Ave
 33. Mrs. Carolyn Oak 3211 Homestead Ave.
 34. Donald Oak 3211 Homestead Ave
 35. Richard D. Botkin 3602 Pearl Ave.
 36. Michael Mairat 3024 W. High St
 37. W. G. B. 1217 Washington St.
 38. J. E. 923 S. M. Schuman
 39. James R. Sheth 1525 S Concord
 40. Edw. J. Sheth
 41. Earl R. Bowler 3216 Pansy
 42. Earl Williams " "
 43. Bertha Quabken 114 S. Washington
 44. 5522 Pearl Ave.
 1. Daniel Jennings 3427 Calgordon
 2. Walter J. Jensen 3511 Kiota

3. Michael K. Heischer 1224 S. Zenith
4. Laura Haage 814 S. Ohio
5. Ernest C. Cane 3210 Perry
6. Mrs. Mrs. Albert A. Elmore 3132 Perry
7. Mrs. Mrs. R. R. Arhonen 3131 Keota Ave.
8. Mrs. Linda Berndt B 2, 0 4 Perry
9. L. Denny Morris 3132 Keota
10. Lani Lee 3112 Keota
11. Elsie Peiffer 3107 Keota
12. Ellen Adams 3115 Keota
13. Clara Wagner 3119 Keota
14. Dorothy M. Coffey 3121 Keota
15. Mrs. D. L. Edger 3204 Keota
16. Mrs. W. H. D. 3207 Keota
17. Mrs. J. W. Roy 3211 Keota
18. Mrs. J. E. Swan 3224 Keota
19. Mrs. James Harper 3248 Keota.

STATEMENT OF RUSSELL D. SMITH, SECRETARY-MANAGER, SOUTH COLUMBIA BASIN
IRRIGATION DISTRICT, WASHINGTON

On behalf of the Board of Directors of the South Columbia Basin Irrigation District, I am pleased to inform you that we support the President's Budget as it relates to energy and irrigation development on the Columbia Basin Project for F.Y. 1983. We particularly support those items budgeted for:

- a. The Grand Coulee Pumping and Generating Unit Nos. P/G 9, 10, 11 and 12;
- b. Irrigation Block 26 Laterals; and
- c. Drainage Construction.

Irrigation Block 26 lands are owned primarily by those whose lands in other parts of the Project were found undesirable to develop or infeasible to drain and were exchanged or were allowed to purchase U. S.-owned lands in Block 26 in lieu of drainage construction. The U. S.-owned lands were either exchanged or sold with the promise that irrigation water would be available in the near future.

On behalf of the Board of Directors and the landowners of this District, I thank you for your past cooperation and courtesies and look forward to the ultimate completion of the 1,029,000-acre Columbia Basin Project as originally authorized and reauthorized by the Congress almost forty-seven years ago.

STATEMENT OF DAVID O. WEBB, VICE PRESIDENT, POLICY AND REGULATORY
AFFAIRS, GAS RESEARCH INSTITUTE

I am David Webb, Vice President of Gas Research Institute (GRI), an independent, not-for-profit scientific research organization created by the gas industry in 1976 to plan, finance, and manage an expanded and fully coordinated gas-related research and development (R&D) program for the mutual benefit of the gas industry and its ratepayers. This program is annually reviewed and approved by the Federal Energy Regulatory Commission (FERC).

I am pleased to submit for the record my views on the Department of Energy's (DOE) FY 1983 Geopressured Methane Research and Development Program. Let me state right at the outset that the new emphasis on letting the market govern the development and introduction of new energy sources and technologies is basically sound, and having industry fund the near-term R&D and final technology demonstration prior to commercialization is also the correct approach since only industry can effectively introduce new products into the market. Thus, while the shift in emphasis outlined in the National Energy Policy Plan (NEPP) is correct, it is such an abrupt change from past federal energy R&D policy that it will require an orderly transition with critical near-term R&D projects funded under industry sponsorship while long-term research is continued by DOE. Therefore, the proposed DOE geopressured methane budget which essentially eliminates all research in FY 1983 is a reversal of the government's stated policy of continuing to fund long-term research that industry will not fund due to market incentives. Furthermore, implementation of this budget would be extremely shortsighted and not in the national interest since the potential of this vast resource can only be realized through research.

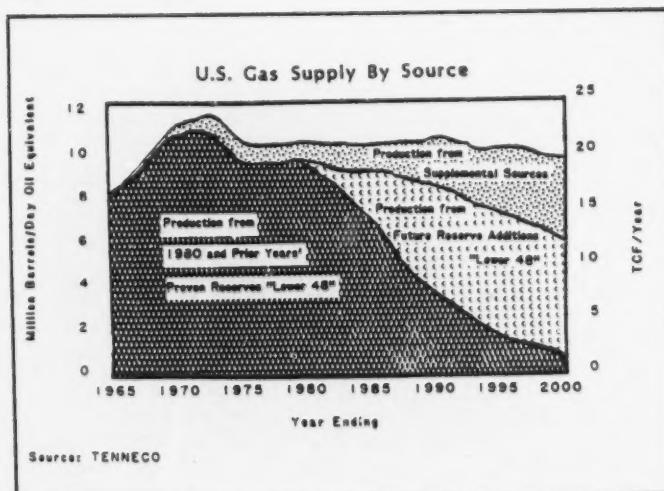
The gas industry has responded well to the change in government R&D policy as outlined in NEPP. GRI has promptly shifted its focus in line with the new federal policy and will propose to its Board of Directors to increase its 1983 contract R&D budget for near-term research funding by approximately \$29 million out of a total increase of \$33 million over its 1982 contract R&D budget (\$84 million to \$117 million). However, this proposed increase in GRI funding will be sufficient to fill only the most serious gaps in near-term gas-related research projects previously cofunded with DOE. The gas industry will not be able to simultaneously fund long-term, high-risk research such as geopressed methane.

In determining the proper federal role and assessing the importance of continued federal sponsorship of long-term geopressed methane research, it is important to understand the fundamental link between the development of a strong gas supply technology base and national energy policy. Today more than 85 percent of our energy is derived from fossil fuels, of which gas provides over 25 percent. DOE's NEPP projects that gas will continue to supply over 20 percent of the nation's energy in the year 2000. However, the key to these projections is whether supplemental gas resources will become competitive through technology development. Natural gas currently supplies more than one-third of the energy used by the industrial sector--the energy equivalent of over 4 million barrels of oil per day. In addition, gas provides 15 percent of the primary energy used for central power generation--equivalent to nearly 2 million barrels per day of oil.

The National Interest in Assurance of Long-Range Supplies

Without adequate continued federal funding for the long-term R&D needed to establish the technology base, especially in the areas of least-cost options for supplemental supplies, the most probable result of rising gas prices is increased oil imports due to fuel switching in the industrial market. Increasing quantities of gas production from supplemental sources will be needed by the nation over the next few decades to provide an assured supply to this critical market.

As illustrated in the following chart and based on DOE's recent projections, supplemental supplies of 4.6 Tcf will be required in 2000 to meet demand. These supplemental sources will become available at



competitive prices only through major improvements in technology. Therefore, establishing the technology base necessary to ensure the orderly development of these potentially abundant or renewable sources of gas is a national priority and requires a continuing federal role since it includes long-term, high-risk research.

Geopressured Methane Resources

One of the major long-term supplemental gas resources is geopressured reservoirs which contain significant quantities of dissolved methane in hot water aquifers underlying a large part of the Gulf coastal region of Louisiana and Texas. DOE has estimated that the available recoverable supplies contained in these reservoirs could range from 300 to 5,000 Tcf.¹ This is the equivalent of 15 to 250 years of gas supplies at current consumption rates of 20 Tcf per year. The range of uncertainty is a result of the extremely limited information which presently exists on reservoir characteristics and methane concentrations in the formation fluids. Only a continued federal research program can produce the data necessary to reduce this range of uncertainty so that industry can assess the technical and economic merits of producing gas from the geopressured reservoirs.

Required DOE Program

Over the past four years, DOE has developed a comprehensive program plan necessary to address the critical technical issues. The overall strategy of this plan is to define the magnitude and distribution of the resource; establish the recoverability of the contained energy; and determine actual costs of production, utilization, and fluid disposal. The key to this strategy is the drilling and long-term flow testing of wells specifically designed for geopressured reservoir testing. These wells are designed for long-term production tests of up to two years at the high flow rates (40,000 barrels per day) necessary for commercial operation. Because the physical and chemical properties of geopressured aquifers vary greatly from one location to another, a substantial number of tests will be required to adequately characterize the resource and its recoverability. DOE has previously estimated that six to ten newly designed wells would be required to perform this research.

To date, short-term testing of resource characteristics has been completed for 12 existing wells of opportunity, and long-term testing is planned for four specifically designed geopressured production wells. By the end of 1982, geologic studies and well testing will have begun to produce detailed reservoir data. The DOE Sunset Review defined the following key factors in completing the geopressured methane research program:

1. The technical readiness for application of geopressured methane is behind that of hydrothermal reservoirs.
2. The program objectives are to define the extent and magnitude of the resource and determine the engineering and economic feasibility of recovery by 1986.

¹U.S. Department of Energy, FY 1981 Congressional Budget Request, Volume 2.

3. The major element of the program is long-term testing of the first geopressured test well completed in Brazoria County, Texas, in 1980 and four new test wells drilled in 1981 and 1982.
4. The program is on schedule, and about 50 percent of the long-term test wells needed are being evaluated.

Through GRI the gas industry has worked with DOE to develop this comprehensive program. Some of the accomplishments of the DOE/GRI cooperative program are:

1. Four shallow geopressured sites have been identified as particularly promising in Louisiana and Texas and are now under consideration for development through DOE's Design Well Program.
2. Down-hole samples have been taken from two wells operating under DOE's Well of Opportunity Program.
3. Through its role as quality control manager for brine chemistry on six DOE-operated wells, GRI has developed analysis standards.
4. A computer model capable of using shifts in thermodynamic conditions to calculate brine chemistry changes has been developed and now requires more field data for validation efforts. This model will allow for determination of chemical changes in brines as pressure and temperature shift during production and disposal. This determination will facilitate development of improved gas production and brine disposal methods.

Since the development of geopressured methane technology has a tremendous potential to supplement the nation's gas supplies, it is essential to complete the comprehensive government research program initiated in 1977.

Funding Requirements for DOE Program

DOE witnesses have testified in previous years that the long-term flow tests of the five specifically designed test wells should be continued for about two years at an approximate cost of \$1.5 million to \$2 million per well per year. DOE cannot meet its program objectives to drill the fifth test well and continue the flow tests through FY 1983 with only \$2.4 million requested in the FY 1983 budget. Since short-term flow tests have indicated much higher concentrations of methane in one or two of the shallower geopressured reservoirs evaluated under the Wells of Opportunity Program, the fifth test well should be designed and drilled in the most promising of the four sites identified under the cooperative DOE/GRI program.

To complete the DOE program as planned and outlined in the Sunset Review will require \$16 million in FY 1983. Of these funds \$6 million to \$8 million will be required to continue the planned long-term flow tests on the four designed wells, \$1 million will be needed to conduct data analysis and environmental monitoring, and \$7 million will be required to drill the fifth design well in the shallow geopressured site. This is the minimum program necessary to complete the resource evaluation and define the actual costs of production, utilization, and fluid disposal.

Since DOE had originally planned to drill six to ten design wells, previous years' appropriations may be available to offset some of the FY 1983 funding. It is estimated that a total of \$10 million in new funding will be required; i.e., an increase of \$7.56 million over the DOE budget request.

Summary

If it can be economically developed, the potential of this resource is so large that it could have a major impact on long-term gas supplies. The key to cultivating industry's interest in developing the geopressured gas resource base lies in accurately determining the technical and economic feasibility of recovering the identified resources. The DOE program can demonstrate the resource potential while lowering many of the existing barriers to widespread development. These barriers--including lack of resource information; uncertainties with respect to production mechanisms, brine chemistry, and disposal; and problems in reliably maximizing gas-to-water production ratios--can be removed by continuing the planned DOE research program.

Total funding of \$16 million is required in FY 1983. If the funding level is only \$2.44 million as requested by DOE, the program will be terminated and the wells plugged and abandoned.

Through 1982 DOE has invested approximately \$135 million to start collecting data in order to define the necessary resource, drill test wells, initiate long-term flow tests, and develop a comprehensive program. To terminate the program in FY 1983 as proposed rather than fund the planned program is not sound economics or a sensible national energy policy.

STATUS OF FOUR COMPLETED DESIGN WELLS

Pleasant Bayou #1, Bressoria, Texas

- o 16,500 feet total depth
- o Well completed in July 1979
- o Limited testing started in November 1979; a major test was planned for 1981 but was cancelled due to an accident. Remedial work continues.

Sweet Lake, Cameron Parish, Louisiana

- o 15,700 feet total depth
- o Well completed in February 1981
- o Not a large reservoir capacity (maximum of 20,000 barrels a day)
- o Limited, short-term flow in June 1981
- o Project has been on standby due to uncertainties of FY 1982 funding. Flow test will start this spring.

Dow Sweezy #1, Vermillion Parish, Louisiana

- o 13,600 feet total depth
- o Well completed in August 1981
- o Only small volume testing to date
- o Flow test will begin in March or April
- o Specifically designed to evaluate drawdown characteristics
- o Reservoir is very small, requires six to nine months' testing

Gladys McCall, Cameron Parish, Louisiana

- o 15,800 feet total depth
- o Well completed in November 1981
- o Flow test will begin this month

STATEMENT OF FRANK KUDRNA, DIRECTOR, ILLINOIS DEPARTMENT OF
TRANSPORTATION

The Departments of Transportation, Agriculture and Conservation support efforts to control federal spending. Due to the current budget constraints, we feel it is important to identify the most critical programs and projects. Therefore, we are urging you to fund Illinois projects and studies which have high priorities. While we are asking for add-ons, we are recommending offsetting deletions.

The Departments of Transportation, Agriculture and Conservation recommend support for items in the President's budget and additions detailed below. Recommendations are based on the latest reliable information concerning project needs, Corps capability, priorities, progress, local sponsorship and expected results.

Surveys Supported

Chicago-South End of Lake Michigan	\$ 100,000
Chicago Underflow Plan	1,300,000
Fox River and Tributaries	433,000
Richland Creek	260,000

Advance Engineering and Design Supported

Moline	\$ 281,000
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Construction Supported

East Moline	\$ 1,230,000
E. St. Louis and Vicinity	2,700,000
Fulton	1,325,000
Illinois Waterway, Dresden Island Lock and Dam	736,000
Illinois Waterway, Lockport Lock and Dam	500,000
Illinois Waterway, Starved Rock Lock and Dam	499,000
Lock and Dam #26	68,200,000
Milan	4,000,000
Rockford	400,000

Operation and Maintenance Supported

Calumet Harbor and River (Diked Disposal)	\$7,500,000
Chicago Harbor (Diked Disposal)	1,300,000

Chicago River (Diked Disposal)	1,350,000
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Add-Ons

The Illinois Department of Agriculture requests two studies be added:

Mackinaw River (FC)	\$ 150,000
Sangamon River South Fork, Flat Branch (FC)	100,000

The Illinois Department of Conservation requests three studies be added:

Quincy Bay (N)	\$150,000
Ill. Shore from Waukegan to Wisc. State Line (N)	170,000
Ill. Shore of Lake Michigan (BE)	440,000

The Illinois Department of Transportation requests two items be added:

Diversion of Lake Michigan (SS)	\$210,000
Lake Michigan Diversion Accounting	\$250,000

The 1980 amendments to the 1967 U.S. Supreme Court Decree authorize the COE to perform the measurements and computations required to determine Illinois' diversion of Lake Michigan water. This additional \$250,000 in the Chicago District's budget will provide the funds necessary for the Corps of Engineers to fulfill this obligation, for which they are currently only providing an overview function.

The St. Louis District is requesting only \$384,000 for operation and maintenance of Kaskaskia Navigation Project. We were informed this will only provide caretaker status--the waterway will be closed to traffic. Yet, the Corps of Engineers is also requesting \$1,700,000 for construction (dredging). A construction funding request is not necessary if operations are to be shut down. An additional \$149,000 in the operation and maintenance account would allow the waterway to remain open. We strongly urge you to add \$149,000 to Kaskaskia River Navigation operation and maintenance.

Kaskaskia River Navigation - O&M	\$149,000
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Our request for add-ons amounts to \$1,619,000. Because we support budget balancing efforts, we recommend that funding for the following two projects be reduced to offset our requested add-ons.

Reductions

Kaskaskia River Navigation (dredging)	\$1,700,000
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The proposed dredging is not essential for operation of the waterway, but the requested add-on, of \$149,000 for operation of the lock is critical.

Mississippi River, Coon Rapids Dam to Ohio River	\$ 840,000
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Our information indicates that the Rock Island District has allocated the above referenced \$840,000 for hydropower studies. We have, previously, advised the Corps that these studies are not needed since the Federal Energy Regulatory Commission has issued preliminary permits to non-Federal entities to study the feasibility of hydropower development.

The funding for the projects recommended for reduction amounts to \$2,540,000. These \$ should be reduced appropriately for the add-ons.

We, also, would like to express our strong objection to legislation proposed in the budget (p. I-H 12) that would permit use of Inland Waterway Trust Funds for Mississippi River and Tributaries Project (MRT). This in essence would divert navigation fuel tax to flood control projects in MRT. We do not believe that revenues from navigation user charges should be used for other purposes.

In addition, we have recently written Assistant Secretary of the Army for Civil Works Gianelli concerning the display of budget requests which ascribes a disproportionately large share of the budget to Illinois. This accounting procedure unfairly assigns projects of multi-state benefit to Illinois which is very misleading. Copies of our letter have been provided to the Subcommittee. I am requesting the Subcommittee to give due consideration to our problem and recommendation.

STATEMENT OF ANTONINE LAFATA SOTTILE, DOCTOR OF
ENGINEERING, WASHINGTON, D.C.

Mr. Antonine Lafata Sottile
Ph. Doctor of Engineering
P.O. Box 28292
20005-0292 Washington, DC

Washington, DC
April 14, 1982



Ref:

SENATE Record part 3. Fiscal Year 1982
Energy and Water Development Appropriations
pp. 1932 to 1943 - year 1981 - H.R. 4144 -;
MY statement with my PETITION to APPROPRIATE
\$. 25. Millions, in order to advance the
applications of my PROJECTS, in the interest
of our NATION.

Introduction again of the TABLED above petition
for consideration in F.Y. 1983. Appropriations.

GENTLEPERSONS

By presenting to you again my PETITION, as
referenced, to APPROPRIATE \$. 25. MILLIONS
in F.Y. 1983. Appropriations, I stress the
urgency to advance the applications of my
PROJECTS, in order to assure enormous benefits
and leadership to our NATION, next years,
next Century.

Thank you

Five PATENTABLE Concepts stressed in my PROJECTS

* Solar Mirrors Concentrators, settled in Earth's
Synchronous Orbit, to assure almost 24.hr./Day
SUN radiation on selected areas of ground surface
and to provide unlimited, clean, near free

Electric energy.

solar technology being ready and becoming
competitive, it would generate a great number of
JOBS in the production, installation, as well as
in operation and maintenance of solar panels and

devices, in a widespread way, all over the country, avoiding the inconveniences of big central generating plants, extense transmission lines, environment, etc. Immediate initiatives, for example, by the Army Corps of Engineers, the 5. power Administrations, the Tennessee valley Authority, etc., would save a decade of lost time, waiting for private initiatives only.

* Wagon EUPEKA, electric vehicle, maintains at PERMANENT LEVELNESS its body, through rotation by a spherical bearing over the underframe, which runs in a succession of downgrades and upgrades, these ones to provide positive and negative FREE accelerations.

It will be able to underpass crossings (avoiding stopping lights and assuring continuous URBAN traffic), to underpass rivers, railroads' grade crossings, etc. By its flywheels it will save brakes' energy and recuperate 4/5 of energy in transportation, for thousand years.

Because of its body's permanent levelness, passengers will appreciate alike feelings as in ordinary elevators, and cargoes will not receive damages.

* The bulk of PUBLIC WORKS, required to modify tracks' and roads' gradients and courses, in order to exploit gravity's FREE accelerations, will result appropriate to confront crises of unemployment, inflation, recession, that ordinary financial palliatives are unable to curb.

* LTA.=Twin dirigibles, and above all, TRAINS, flying 15. to 20. cm. over ground surface, by electro-magnetic suspension-propulsion, to curb JETS' proliferation in the sky's lanes.

To stress my propositions to get: 100.% FREE, power required for SUSPENSION; 90.% FREE power required for PROPULSION; materials' requirement (unbroken copper windings, or alternate solution of unbroken Aluminum sheet, laid on the tracks' ground, all the way), limited to about 10.% upgrade of each run.

* My proposition to improve next century PLANETS VENUS' and MARS' adverse environments, in 50.year lapse, instead of 1,000.year lapse of others, advocating genetic engineering, etc.

PROJECTS' ECONOMICAL IMPORTANCE

This is the 3rd. consecutive year I am requiring appropriations for my projects. They were not even quoted in last year H.R. 4144 Bill, and its broad accompanying report.

The \$ 25. million of my request could be defined as 'approaching the size of a quark, confronted to the huge appropriations allotted to questionables purposes.

The PATENTABLE CONCEPTS, stressed in my projects, and summarized in the joint written statement, by their strong technological impact, will assure enormous benefits and leadership to our Nation, next years, next century.

To notice the 3rd. central CONCEPT, emphasizing the ECONOMICAL importance of these projects: requiring a bulk of public works, they will supply a lot of JOBS, increase the demand of goods, and balance the existing surplus of goods, main source of crises.

Jobs supply constitutes the effective means to curb crises, deriving from unemployment, inflation, recession, that ordinary financial palliatives are unable to curb.

European countries, having neglected this elementary rule, are on the brink of changing rank to attain the row of under-developed countries.

Should this regrettable NEGLECT proliferate, it is possible to have next century a total, monotonous under-developed world.

To avoid this danger, my joint proposition to change the department of Energy to department of Solar Energy by advancing solutions of the kind I promote, would be advantageous.

Thank you

Ref :

- My letter of Sept. 28. 1981, urging to legislate a BILL, authorizing the 5. power Administrations to CONSTRUCT, to OWN and to OPERATE SOLAR power plants.
- MY present PETITION to change the Department of Energy into the Department of SOLAR Energy, including the 5. power Administrations, and SCRAPPING everything connected with Nuclear problems

GENTLEPERSONS

- The current proposition of DISMANTLING the Department of Energy is opposed by every Congressman, so far interviewed.
- As referenced, I take the liberty to advance my PETITION to change the Department of Energy into the Department of SOLAR ENERGY, including the 5. power Administrations and eventually other Agencies related to solar and renewable resources and SCRAPPING every connection to Nuclear problems.
- The personnel in the Department of solar Energy, will improve work's efficiency, being liberated from tasks, whose consequences they have later to REGRET

c.c./

Thank you

SENATE Committee on: Budget; Appropriations; Energy and Natural Resources; Commerce Science and Transportation; Environment and public Works.
HOUSE Committee on: Budget; Appropriations; Energy and Commerce; science and Technology; public Works and Transportation.

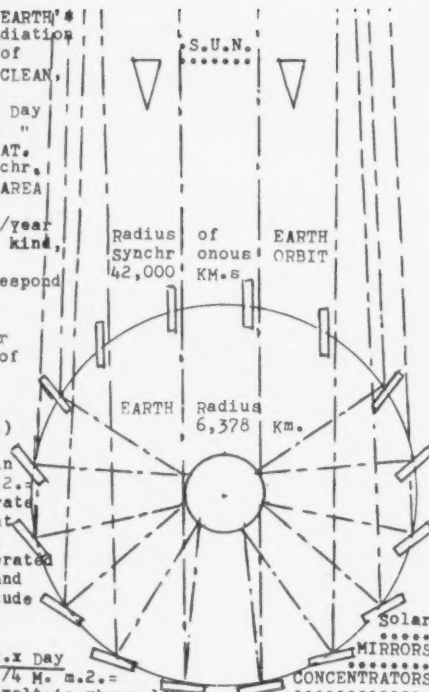
SOLAR MIRRORS CONCENTRATORS settled in EARTH'S SYNCHRONOUS ORBIT would assure SUN's radiation almost night-and-day on selected AREAS of EARTH surface, and provide UNLIMITED, CLEAN, near FREE Electric Energy.

PHOTOVOLTAICS' efficiency = $5 \text{ KWh./m.}^2 \times \text{day}$ would result multiplied to $20. \text{ " / " .} \times \text{ "}$ assuming exploitation of COGENERATED HEAT. 120. Solar mirrors concentrators in Synchr. orbit, each one illuminating a $10. \text{ Km.}^2$ AREA of ground surface, at $20 \text{ KWh./m.}^2 \times \text{day}$ efficiency, would generate $8.76 \text{ T. KWh./year}$ that is above the total energy of every kind, used last year in the U.S.A. -

$8.76 \text{ Tera KWh. (T. = Tera = Trillion)}$ correspond in obsolete terms to 87.6 QUADS - 140. Solar mirrors in identical assumed settlement would generate 10 T. KWh./year and up, that is about the total energy of every kind supposed to be used around year 2000. in the U.S.A.

One million K.watt solar plant (1.M.KW.) by average INSOLATION = 1 Kw./sq. meter (1.KW./m.² = below average insolation in the U.S.A.), would require 1.Million m.² = 1.Km.² square of photovoltaics to generate 5.M. KWh./day, complying with department of Energy's GOALS of $5 \text{ KWh./m.}^2 \times \text{day}$, accounting with: exploitation of cogenerated heat - solar panels pointed to south, and inclined by an angle equal to the latitude of the site - eventual concentrators, mechanisms to track the SUN, etc. -

The multiplied efficiency = $20 \text{ KWh./m.}^2 \times \text{day}$ assumed in my PROJECTS would require $1/4 \text{ M. m.}^2 = 1/4 \text{ Km.}^2$ square of solar panels (photovoltaic, thermal) to generate 5. M. KWh./day, as above, through a lower PEAK power capacity solar plant = $1/4 \text{ Million K.watt}$, accounting with: exploitation of cogeneration - permanent insolation during almost 24.Hour./Day - stronger insolation than average at ground level, (by example: in the range of Equatorial insolation) provided by MIRRORS CONCENTRATORS in SYNCHRONOUS ORBIT.



DEPARTMENT OF ENERGY
.....

TABLE 2 SOLAR ELECTRIC GOALS

TECHNOLOGY	DEMONSTRATED CAPITAL INVESTMENT (\$/KwE)*	IMPROVEMENT FACTORS	CONDITIONS Year 1985
SOLAR THERMAL	1300	X8-12	5kWh/m ² /day
PHOTOVOLTAIC	1100	X30-50	Year 1990 5 kWh/m ² /day

SEVEN IMMORTAL PRINCIPLES designed to solve forever PROBLEMS of Energy and Economy: 1) Solar Energy -2) Electrification -3) Electromagnetic Suspension-propulsion -4) savings of Energy -5) Tunneling Generalization -6) gradients' Utilization -7) Wagon EUREKA electric Vehicle, Expansion "TO REINVENT tracks and roads", it is my answer to the program of others devising "TO reinvent the car". The CAR was reinvented in 1974, with Wagon EUREKA, my claimed INVENTION. The 4. different means, I proposed, assure a PERMANENT LEVELNESS to its body, while its underframe remains engaged in a succession of downgrades and upgrades providing GRAVITY's free positive and negative accelerations.

principles: 4) savings of Energy -5) tunneling Generalization -6) gradients' Utilization - are labor intensive and suited for prompt APPLICATION. They are STRESSED in my PROJECTS, which, requiring a BULK of public works, will SUPPLY a lot of JOBS.

A kind of JOBS which, because generated by new initiatives, will not compete and not eliminate existing jobs.
A kind of JOBS which will assure PROFITS for thousands of years.

principles: 1) Solar energy -2) Electrification -3) electro-magnetic suspension-propulsion -7) Wagon EUREKA, electric vehicle - are more capital intensive, but it is urgent to address immediately the phase of projects, in order to achieve in a few years PRACTICAL RESULTS and assure to the country enormous benefits and LEADERSHIP next century.

Canals, Gradients and Wagon EUREKA to make possible: Underpassing of Rivers, instead of bridges; underpassing of railroads grade crossings; elimination of stoppage lights at crossings, assuring uninterrupted urban traffic and semi-underground urbanization; adoption of A.T.S. interchange, instead of costly, conventional clover-leaf interchange; savings of energy = 4/5 in transportation for thousand years; etc. Trains flying on the electro-magnetic field, complemented in oceans by ITA, Twin dirigibles to curb air traffic of jets and other HTA. craft. Solar Mirrors Concentrators, settled in Earth's Synchronous ORBIT, to assure night-and-day sun radiation on fixed areas of Earth's surface and to provide UNLIMITED, CLEAN, almost FREE electric energy.

To condition PLANET VENUS and PLANET MARS next century, it is necessary to launch multiple probes, in order to complete our knowledge about their adverse environments.

To improve then a project of mine claims to reach greater results in a 50-year lapse, while plans of others require genetic engineering and labor of 1000 years.

My PROJECT: low temperature of Mars, corrected by solar Mirrors in its synchronous orbit - high temperature of Venus, corrected by SHADES in its synchronous orbit - Atmospheres of both planets, corrected by LATS fissioning CO₂ into C and O₂ (O₃=Ozone) etc. - To notice VENUS' size and Gravity (near Earth's ones) and slow ROTATION (243 days vs. Earth 1. Day)

7. Immortal principles stressed in my PROJECTS: 'EUREKA' - A leaning Subway (years 1965 & 1974) - A.T.S. Urbanization with uninterrupted traffic (1968) - Wagon EUREKA, electric vehicle (1974) - Plan 3-phase of Transportal Electrification (1975) - Project ARCHIMEDIS (1977) - A.T.S. (Air-land-sea) zero-fuel Transportal Immort. plan (1979) - Twin dirigibles (ITA = lighter than air craft)

STATEMENTS: by Mr. Antonino Lafata Gattile Ph. Doctor of Engineering
P.O.Box 28292 • Washington, DC 20005-0292
before the U.S.A.'s CONGRESS the Years 1975 to 1982 -

-
- (9) HOUSE Committee on Appropriations • Fiscal Year 1983 • Hearings on Energy & Water Development
(pp. 2586 to 2593)
April 1. 1982. statement on: • five PATENTABLE Concepts stressed in my PROJECTS •
• Solar Mirrors Concentrators, settled in Earth's Synchronous ORBIT, to provide unlimited, clean, almost free Electric Energy • My petition to change Department of Energy into Department of SOLAR ENERGY, in order to avoid its dismantling •
-
- (8) SENATE Committee on Appropriations • Fiscal year 1982 • Hearings on Energy & Water Development
(pp. 1932 to 1943)
March 24. 1981. statement on: • seven Immortal principles to solve forever PROBLEMS of Energy and Economy • Solar Mirrors in Synchronous Orbit (providing unlimited, clean, almost free Electric energy) • Wagon EUREKA, electric vehicle (INVENTION) • A.T.S. (Air land sea) zero-fuel Transportation Immortal plan • Twin Dirigibles = ITA (lighter than air craft) • Plan 3-phase of 'Transports' Electrification • ATLAS Interchange (replacing clover-leaf interchange and assuring continuous urban traffic) • plan to condition planets VENUS & MARS in a 50-year lapse • Resus •
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- (7) HOUSE Committee on Appropriations • Fiscal year 1982 • Hearings on Energy & Water Development
(pp. 2402 to 2411)
March 1981. statement on: • seven Immortal principles • Solar Mirrors in Synchronous orbit • Wagon EUREKA, electric vehicle (INVENTION) • A.T.S. (Air land sea) zero-fuel Transportation Immortal plan • Twin Dirigibles = ITA • Plan 3-phase of 'Transports' Electrification • ATLAS Interchange • Planets VENUS & MARS conditioned in 50 years •
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- (6) SENATE Committee on Appropriations • F.Y. 1981 • Hearings on Department of Interior; May 16. 1980. statement (pp. 953 to 957) on: • HELIUM uses and storage - Helium-gas' and Sun-Helios' civilization, beginning next Century •
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- (5) SENATE Committee on Appropriations • F.Y. 1981 • Hearings on Transportation • April 17. 1980. statement (pp. 144 to 150) on: • A.T.S. (Air land sea) zero-fuel Transportation Immortal plan • Wagon EUREKA • Twin Dirigibles • 7. Immortal principle •
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- (4) HOUSE Committee on Appropriations • F.Y. 1981 • Hearings on Transportation • April 16. 1980. statement (pp. 615 to 619) on: • A.T.S. (Air land sea) zero-fuel Transportation Immortal plan • Wagon EUREKA • Twin Dirigibles • 7. Immortal principle •

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- (3) SENATE Committee on Appropriations • F.Y. 1981 • hearings on Agriculture • April 2, 1980. statement (pp. 513, 514, 515); • Useful products by harvested plants: Parthenium argentatum - guayule (natural RUBBER) • Sunflower (OIL) • Euphorbia lathyris (GASOLINE) • Jojoba (LIQUID WAX) • Leucaena (FIBER, FUEL) • Cassava (ETHANOL) • Kenaf supertrees (FIBER, CORDAGE, LUMBER, FUEL, etc.) • Water Hyacinth (water CLEANER, Metal RECOVERY, METHANE, etc.) •
- SENATE and HOUSE RECORDS
- (9) Appropriat. 1983
- (87) Appropriat. 1982
- (7) Appropriat. 1982
- (6) Appropriat. 1981
- (5) Appropriat. 1981
- (4) Appropriat. 1981
- (3) Appropriat. 1981
- (2) Electric vehicle
- (1) Electric vehicle
- (1) HOUSE Committee on science and Technology • June 3, 4, 5, 6, 1975. hearings on: H.R. 5470 = Electric vehicle research, development and demonstration act of 1975 • Statement (pp. 728 to 740) on: • LEANWAY = A Leaning subway • WAGON EUREKA, electr. vehicle (INVENTION) •
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CONCLUSION OF HEARINGS

Chairman HAYFIELD. That concludes the hearings. The subcommittee will recess and reconvene at the call of the Chair.

[Whereupon, at 3:45 p.m. Thursday, April 1, the hearings were concluded and the subcommittee was recessed to reconvene at the call of the Chair.]

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